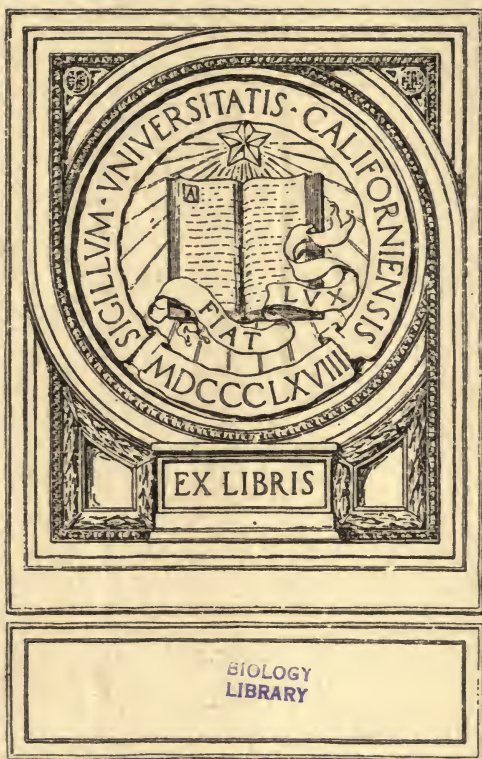


THE ERRAND OF MERCY





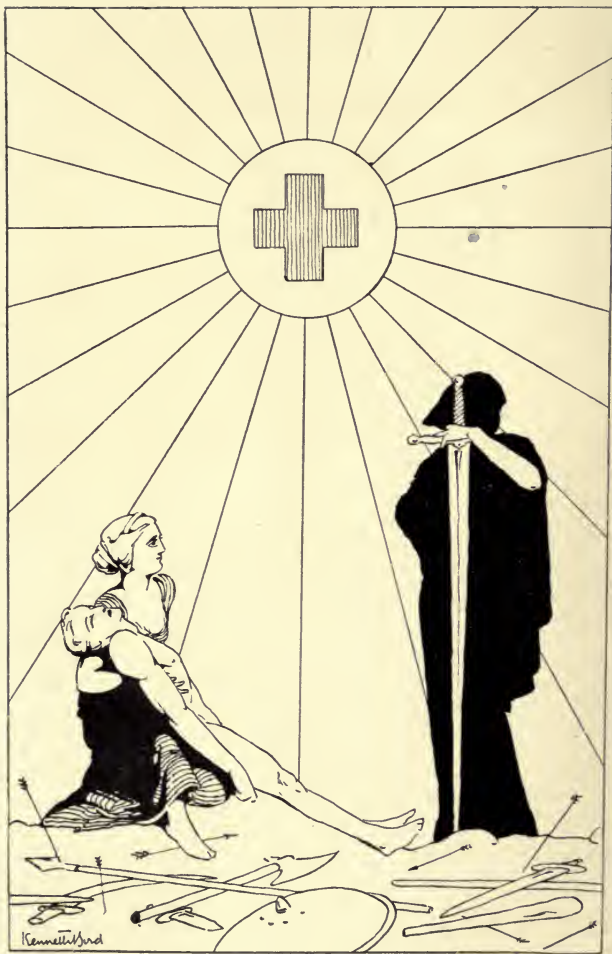
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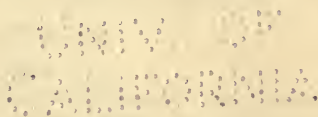
"THE ERRAND OF MERCY."

[Frontispiece.]

The Errand of Mercy

*A History of Ambulance
Work upon the Battlefield
By M. Mostyn Bird*

With 17 Illustrations.



LONDON: HUTCHINSON & CO.
PATERNOSTER ROW ❖ ❖ 1913

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ACHILLES BANDAGING PATROCLUS.

From a Greek Vase.

THE ERRAND OF MERCY

CHAPTER I

War, Religion, and Science—The character of battles changes—The forging of the Link—The three Ambulance problems—Heroes of the crusade—The three periods of Medicine.

THE history of the treatment meted out to those Wounded in War is the history of the World. It tells the story of the growth of Man, from the day of the savage who strikes down his rival in love or the chase, to that of the modern conscript, torn from the desk to fall to the bullet of a far-off, invisible foe.

Looking back across the battle-fields of the ages, we see the wounded groaning forth tortured lives, lifting imploring hands, the while those who love them agonize in vain to help them, because the link between is missing. The forging of the Link has been very slow; even yet it is so slender that it will snap under unexpected strain, now after twenty-five centuries in which we can trace its gradual welding. But the Link is now there.

Three great influences have been at work upon Man during these centuries : War, Religion, and Science. Sometimes as allies, sometimes as rivals, they have wrestled for his soul. As the rivers mould the face of the land, patiently but with a deadly precision, so these forces carve out the face that Man lifts to his God, and to his brother. As the earth-tremor or the cyclone overwhelms and remodels in a moment the natural world, so one or the other of these forces will change in a moment the mental attitude of a Man.

And these three forces have been ever at work upon the man that is wounded. War has done something beside give him his wound : in many ways War has done most of all to help the forging of the Link. It has kept him before the eyes of his fellows, its accumulated horrors have forced conviction to the point of action : and a long peace has never been his friend. The Christian religion has dictated pity for all suffering, and has focused into useful channels the general impulse of benevolence. Science has given the hardly-won secrets of healing to the service of his wound.

He has not suffered martyrdom in vain : it is plain how much he has given to each of these. He has been the spur upon the heel. His agonies, his death or his maimed existence, have been one of the great motive powers of the world. It is impossible to imagine the march of civilization continuing if the problems which he presents were

not ever thrusting men out of the comfortable Edens in which their natural instincts teach them to take refuge. War, without the awful aftermath of suffering and disease, would have little more influence upon the world's progress than a Football Match or the Olympic Games. It is the wounded who lend to War its grim significance, its fearful powers. It is the cost, in terms of lives, not of money, which makes victory barren and turns defeat into disaster.

To economize in lives, and to disembarrass himself of his wounded, is the Commander's natural preoccupation.

* * * * *

The aspect of a battle-field has been always changing through all these twenty-five centuries. In no two decades has it remained the same: as weapons have changed, and the race and character of the combatants have differed, so the battle-fields on which they have fought out their quarrels have altered in appearance. On some, Science has had a fair chance to alleviate suffering, save life, and learn valuable lessons. On others, a wild carnage has stamped out all life but that of the whole and victorious. For instance, how different the fate of one wounded in the more or less single combat method of fighting on the plain before Troy, from that of the legions of the later Roman Empire who were overwhelmed by the

fierce tide of the northern barbarians. They did not leave life in any disabled enemy found on the field, and even their own wounded were left to shift for themselves and trust to the untender mercies of the peasants of the neighbourhood. While the former had a chance of being rescued and cared for by his own friends with such rude skill as they possessed.

Two important changes which have taken place in the character of battles have chiefly affected the fate of the wounded. The first of these was the introduction of long-distance fighting. It began with the collective use of bows and arrows: the battle of Crecy (1346) may be taken as typical of the new way in which opposing armies stood back from one another and fired blindly at each other's masses. The effect upon the individual soldier of this cold-blooded wielding of his weapon must have been very marked. He had to endure the sight of his friends and comrades falling stricken and bleeding beside him, possibly a sight he now had leisure to observe and meditate upon for the first time. There is an animal savagery in the heart of man which wakes at the call of the hand-to-hand combat, when he rends and batters and slays as though possessed by a lust for blood to which in his saner moments he is a stranger. This savage fighter has no time to notice or think about the wounds and agonies of his friends or his enemies, until the battle is ended or his own fall gives him

quite other things to trouble about. But place him in ranks drilled to stand and wait, firing their missiles at random at an enemy who has done nothing to raise their personal rancour, and their attitude to the whole affair is insensibly altered. It is no longer a case of battering or being battered, to death.

It is noteworthy that the farther and farther off the combatants have stood from each other owing to the invention of modern long-distance weapons, the greater the general preoccupation with the condition of the wounded, and this not only because there is a far greater proportion of wounds which with attention will admit of cure.

Conscription is the second of these two important changes. It is impossible to estimate exactly the value of anything so intangible as an influence, yet we can look back and see how, with the changing composition of the rank and file of armies, the public attitude to them has also changed. Europe, after a long interval in which her soldiers were professional, from the day of the "trained bands" (fifteenth century) to the regular armies recruited in the main from the lowest classes of the people (eighteenth and nineteenth centuries), returned to that most ancient of all methods of raising an army, Conscription (France, 1798). It is plain how great a difference this would make in the attitude of the people generally towards the soldiers who fought

their battles. While husbands, brothers and sons were fighting for the national existence, those at home were clamouring to the authorities to safeguard their health and provide for the healing of the wounds received in the national service. The friends of the soldier were no longer obscure and ignorant folk, who either took avoidable death and disease as the inevitable concomitants of War, or whose voices were too weak to reach the public ear. When the wounded were drawn from every class, every section of society, every town and village in the land, their welfare was the urgent interest of the whole nation. And such a sudden awakening to the universal importance of Ambulance Work on the Battle-field as was witnessed in the nineteenth century was a thing inevitable.

Whole nations rose up and demanded that this matter should receive attention: and to their honour the Doctors and scientists led the agitation: too often they had hitherto been martyrs to their own zeal, official maladministration, and the lack of organization, and they welcomed the popular interest in this vital matter.

At much the same hour the Press was proved to be a real power in the hand of Democracy. For this movement was in its essence a democratic movement. There was no suggestion that officer should have better treatment than private. To harness Mercy and Skill to the task of economizing

human life was the simple aim set before the Authorities. The story of how this has gradually come to pass is the subject of this book: and as one cons it over, one is conscious of a shocked surprise that it has taken all these weary centuries of bloodshed to bring, even to such very moderate perfection as is at present attained, the necessary organization to link up the man with the wound with the men and women who are eager to help him. Here among much that is painful, is many a bright spot. Like lamps in the dusk, the names of those who have given their lives and fortunes for this cause stand out in the pages of history. Warriors, scientists, and religious alike have grappled with the problems presented: the finest flower of sacrifice has blossomed on the battle-field, has brightened the unspeakable horrors of improvised "hospitals" that betray the very name of hospitality. The pioneers fought in a mist of ignorance, prejudice, lethargy—the attitude comprehended in that remark only too often heard from different lips and read on different pages, "these things are inevitable in War." In the face of all difficulties it has been shown that the wounded can be collected quickly and safely by trained bearers, attended to, grouped, distributed, fed, and cured with nearly as much certainty and despatch as if they received their hurts in a street accident at the very gate of a London hospital! It has been done, is the answer that can now be given to those

who met our pioneers with the *non possumus* that kills initiative and is the brake on the wheel of the world's progress.

* * * * *

As soon as a man falls wounded he requires three things: 1. Treatment of a temporary nature; 2. Transport from the field to a place in which he can obtain surgical aid; and 3. An asylum in which to rest while his wound is being cured. And all the time he requires food and drink and protection alike from disease and the elements. To obtain these three essential things for him as expeditiously as possible, a very elaborate and costly organization has been found to be necessary.

The history of its development is one of continual breakdown. Every method anciently adopted has proved unequal to the strain that was sure, sooner or later, to fall upon it and show its weak points. Without undue pessimism, indeed with the liveliest confidence that the perfect and pluperfect methods of dealing with these problems will be found and dismissed, and found again in the far future, one can with equal certainty predict that breakdowns will occur in the present-day system. This I shall describe in detail in its proper place in the story, its outstanding feature being the interdependence of State and Voluntary organizations. Of its inherent weaknesses people are still saying to-day, as of old, that they are inevitable in war.

But it is just because we can learn from the Past that nothing less than perfection is "inevitable" in this world of evolution and development, that I am emboldened to write this simple account of how the modern system has grown.

The sight of the heroes of this great struggle to help the helpless, to lessen their sufferings, and economize their lives, engaged in desperate battle with what might well have seemed insuperable difficulties, should embolden us to look at the conditions of our own day with clearer eyes. In this battle we find no excuse for cowardice, whether we look at the heroes of Medicine who fought for the scientific truths which were to mean healing in place of death to the man with a wound. Or again at that band of Amalfi Merchants at Jerusalem, who, struck with compassion for the pilgrims wounded and outraged by Mohammedan marauders, founded the Hospital in the Holy City which has been the model of all subsequent hospitals, and grew into the world-wide Order of St. John of Jerusalem. Or at Florence Nightingale, who by the soundness of her technical knowledge and the splendid force of her character brought order, cleanliness, hope and comfort into the "hospital" shambles of the Bosphorus.

When we have said that by her teaching and example she brought about such a result as the reduction of the death-rate from forty-two per cent. to five per cent. in three months (according

to Kinglake), can we say that anything is impossible?

Or see the simple Swiss traveller, M. Henri Dunant, caught in the storm of war that broke over Northern Italy in 1859, when the Allied Armies of France and Sardinia met the Austrian invader. See him, obsessed with the pity of it and the waste of it; repeating the cry of pain and terror he had heard there, till it rang in the ears of all Europe. See him laying his scheme before the Committee of Public Utility in Geneva; and these sober, unambitious Swiss burghers embarking on a crusade more splendid in ideal, more apparently hopeless of success, than any that had been attempted in the days of chivalry, the crusade of the Red Cross of Mercy. See them buttonhole every Monarch and Statesman in Europe, and pour their urgent tale into his ear, to find almost to their own surprise, the world ready for their message. And the "Geneva Convention" was the result, the international Charter of safety for the wounded man, and of freedom for the doctors and nurses who devote themselves to his succour.

By this Convention organization on an elaborate scale was made possible; since both the wounded, and their helpers, and all medical stores, were declared neutral, the tide of battle might ebb and flow which way it would, the work of succour could be pursued uninterruptedly. The Geneva

Convention of 1864 is the point on which all the story of the Past converges; all its experiences and struggles and mistakes and triumphs culminate in that one splendid effort. And when it had been made, men wondered why such a solution of the distressful problems of the battle-field had never before been thought of. From that point likewise dates all modern effort to deal with the situation that it has created. The wounded lie on the ground in ever-increasing numbers in modern battles, owing to the huge numbers of troops employed: by an International agreement now universally subscribed to, their lives are spared and both sides can combine to serve their need. Medical stores, hospital furniture, ambulances, all are sacred to their work, and may not be deflected from it: bearers, doctors, and nurses can work in safety under the Red Cross Flag. The public in every country have awakened to the need for generous aid in money and kind, and for personal sacrifices as well. States have realized their responsibility to give the Army Medical Service in Peace an elasticity that shall make it equal to the demands of War. What remains to be done one might wonder? And yet the problems that crop up in connection with every one of the three main points enumerated above—treatment, transport, and hospital—are endless, and present new difficulties in every campaign. If in but one respect the organization is defective the whole

is rendered abortive. First aid, transport, and base hospital are absolutely interdependent. It is no use having elaborate base hospitals if the man lies where he fell, it may be two days or three, before he is picked up. It is no use having a completely satisfactory bearer and transport system if there is no hospital accommodation for the wounded they have collected. And it is no use collecting quickly and housing luxuriously a man who has already become hopelessly ill from hæmorrhage, or absence of first dressings. Not to mention the imperious necessity of continually supplying suitable food and drink to the man who is weakened by a wound.

Many minds are bent upon these problems to-day; many schemes have been tried, and are on trial. And we are all of us now beginning to realize that there may be a part for us to play in this great drama. It has appeared to me that a simple account of the work during its inception and growth may be of some use to those who wish to find out where to set their hands to this task. Much has been written, and is at the service of the genuine student, but this review of the whole field is intended, not for students, but for those without previous knowledge of the subject.

Dr. Evans, the American Military Surgeon, has said that: "A veracious history of all wars would be a history of disease, death and suffering which might easily have been avoided." We have come

to look upon such a statement as a direct challenge to our humanity and our civilization: if these horrors be avoidable, we will bear our part in the great work of obviating them.

The history of the development and organization of Ambulance Work cannot be made a very pretty story, seeing that it is mostly one of painful failure to respond to the enormous demands made of it. However simply such a tale be told, the unspeakable agonies, the avoidable tortures, the waste of valuable lives, the disgusting and harrowing sights and scenes, dirt and confusion, involved in any such failure, cannot fail to obtrude their hideous details before the reader, though they are not insisted upon by the writer.

* * * * *

The medical history of the world falls into three distinct periods, in each of which one of the three great Ambulance Problems was tackled and more or less solved.

The First is the period of Primitive Medicine: the growth side by side of a Temple medicine founded on the daemonic theory of disease, and resting in the hands of the priests, and of a simple surgery owed to the battle-field, and in the hands of women and laymen. The period culminates in the great days of Greek culture, when Hippocrates collected all the knowledge of his day, and to it added an intellectual achievement of his own

that has, I suppose, never been excelled in any age. In this, Problem I., the treatment of the wound, was dealt with.

In the Second, or Medieval period, we see the stream of Greek medicine divide into two parts: the one to be conserved in the Monasteries and Medical Schools of Europe, and there become petrified; the other to be digested in the East and reproduced by the Arabians. Obscured for a time by the vast revolutions in European history due to the triumph of Christianity, the invasions of the barbarians, the separation of the eastern and western divisions of the Roman Empire, and the birth of Mahomet and the Arabian conquests, we see the Renaissance of Learning lead to a collision between the Arabic School of Medicine and its genuine Greek original, as preserved by Galen. In this period, Problem III., hospital accommodation for the sick and wounded, was dealt with.

The Third period dates from the sixteenth century, when the classic and dogmatic laws of Medicine and Surgery, already freed from sacerdotal control, were attacked by such bold spirits as Paracelsus and Paré, and finally gave place to a new epoch. All the Sciences, Medicine and Surgery not least among them, made unparalleled strides in this epoch. The constitution of armies and the weapons of war changed, and Man's attitude to the wounded changed likewise, and the culminating point is seen in the Geneva Convention

of 1864. And it was not till this period that Ambulance Problem II., the transport of the wounded, first received the attention that was so long overdue.

* * * * *

The most interesting points in the story of any cause are the heroes who have wrought for it. Looking back across the plains of history, where much is necessarily so dim and confused, our eyes are caught by these names as by peaks, round which their deeds are grouped, while the hidden influences that moved them and that they in turn set in motion lie unperceived in the valleys.

In this attempt to track the painful journey of the wounded man across the battle-fields of the world, I propose to take you from one peak to another, singling out one honourable name after another about which to group the facts I have to lay before you.

CHAPTER II

500 B.C.—200 A.D

Homeric medicine and Aesculapius—Ancient Greek practice—Onasilos, the Army Surgeon—Hippocrates—Medicine in Ancient Egypt—Early Hindu practice—Herophilus of Alexandria—Celsus—Ambulance work in the Roman Legions—The influence of Galen.

SURGERY of a kind is almost as ancient as human life: as soon as men had brains sufficiently developed to recognize injury as an unnatural and curable state, they set themselves to devise some means to rectify it. Military surgery dates from the day when the first savage war party took the trouble to collect its wounded and give them a chance of healing and fighting again, instead of making a meal off them! It therefore owes its existence, primarily, to the triumph of Economy over Appetite.

In the long history of the treatment of those wounded in war, we see the growth of this idea. The Economy of human life on the battle-field is, in effect, the Leader's effort to use the same men twice over.

Once injuries were recognized as curable, and the victors desired to save the lives of their own wounded, Ambulance problems found their footing on the Earth. Here in a moment the Three Problems sprang full-grown into being: I., to treat the wound; II., to transport the wounded; III., to provide a Hospital.

These problems have shown a stubbornness peculiarly their own. Other problems that have arisen during the course of the World's progress have been met and solved by succeeding generations. They have ceased to trouble, or at least have been so dealt with and changed as to be practically new when they reappear. Problems of locomotion, or of government, are solved as they arise, but Ambulance work remains the same to-day as twenty-five centuries ago in its three great essentials.

In this work War, Religion and Science have each taken a hand, and in so doing have either served or hindered each other's interests. But in one important point War has rendered an inestimable benefit to medical science, that is in keeping it, or at least one branch of it, free from sacerdotal control. Military Surgery and the treatment of wounds has from the first been an independent work, which by slow degrees became organized into a profession, and was never vested in the priesthood like the practice of medicine.

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It is in the works of Homer (*circa* 850 B.C.) that we get our earliest glimpse of military surgery. He shows us a distinct and organized profession of healers which must have been even then of considerable antiquity, for such a profession is necessarily of slow growth. His heroes show much skill in the drawing of darts from wounds, and their system of bandaging was elaborate and highly efficient. And it is noteworthy that in his books this military surgery is entirely separate from the priesthood and the mystic medicine of the Temples ; it is a purely secular business.

Homer shows us the first independent doctors whose names we know. He shows us Aesculapius, the King of Thessaly, learning the art of healing from his master, Chiron. This Chiron was a Centaur, one of an ancient race of savages inhabiting the Thessalian hills. They were noted horsemen, which probably gave rise to the legend, perpetuated by ancient Art, that they were half human, half horse. How Chiron obtained the knowledge he imparted to Aesculapius we do not know ; but the King handed this on to his two sons, Machaon and Podalirius, who were much admired among the Homeric heroes for their skill. The distinction between surgery and medicine is first acknowledged by Homer in his account of these two brothers, Machaon possessing peculiar skill in the treatment of visible wounds, while Podalirius followed his father's art and prescribed for internal ailments.

On one occasion Machaon was wounded, and Achilles is depicted as deeply concerned for his restoration because of his special skill in cutting out darts and applying salves to wounds.

Aesculapius was deified by the Greeks, and in their Mythology he appears as the God of Medicine, son of Apollo (Sun-god of Healing) and Coronis. He is said to have been slain by Jupiter with one of his thunderbolts because Pluto complained that Hades was becoming depopulated owing to his arts. According to Cicero there were three different deities of the same name, one in Arcadia famous for having invented the probe and bandages for wounds, one the brother of Mercury, who was killed by lightning, and another who had been the first to teach tooth-drawing and purging. This multiplication probably arose from the spread of the Aesculapian doctrines, which were handed on by Machaon and Podalirius to their sons and to students outside the family, all the initiate alike taking the title of "Sons of Aesculapius."

In this deification of the Doctor we can perceive a desperate effort on the part of Religion to keep Medicine in her own Temples; while War and Science fought to keep it outside.

An organized medical relief insensibly grew up round the Temples in every country, in Ancient Greece as in Egypt and the East. Primitive medicine is largely made up of dreams, penitence and punishment. Sickness was not unnaturally

connected in men's minds with Sin; the great controversy of the Book of Job on this subject well illustrates the important place it took in ancient thought. A sickness was supposed to have a material existence which could be drawn out of the sufferer by emetics, purgings and blood-letting, accompanied by mystic spells and exorcisms. Thus the Temple guardians would naturally commence a system of observation that they might prescribe, for their own credit, the drug or the diet which would assist cure by that spell in which the patient had faith. As the fame of any particular cure practised at a Temple was spread abroad, the sick would drag themselves thither along with the devout but healthy pilgrims who ordinarily resorted to it. And thus the Temple Inns or Rest-houses for pilgrims and travellers became also hospitals for the sick and infirm who were seeking cure. Their treatment and prescriptions were arranged by the priests, and their fees enriched the Temples. As Apollo and Aesculapius were the two Greek divinities of healing, their Temples naturally became the centres of this traffic in drugs and spells. At the Temple of Aesculapius at Epidaurus there was an Inn with four courts and colonnades, and one hundred and sixty small rooms; here was the equivalent of the monastic hospital of the Middle Ages, and the direct ancestor of such great modern hospitals as St. Bart.'s or the Hôtel Dieu.

But the "Sons of Aesculapius" remained outside this Temple organization, as far as we can learn; they carried on their researches in medical schools, and obtained their experience on less devout sick folk and those wounded in battle. Their Schools in Rhodes, Cnidus and Cos were particularly famous; but these were places of research and lecture halls, not genuine hostels in which the sick could obtain treatment.

Beside the Temple hospitals there was in Ancient Greece a State organization of medical relief, which appointed its own medical men and provided *iatreia*, "large houses with large doors full of light," for the sick poor, with beds, instruments and medicines free. Out-patients were seen there or at their own homes. Pupils were received, and no doubt found there the practical experience to supplement the theoretical teaching of the medical schools.

Another post open to the secular surgeons was that of the Palaestra, or gymnastic arena. The great bodily exertions of the youths engaged in physical exercises and contests resulted in a large number of accidents, fracture, dislocation, hæmorrhage, hernia, and the like; and a medical man was always on the spot to administer "First Aid." Medical treatment for all sorts of ailments in Greece consisted largely of diet and exercises, and these latter were prescribed by and carried

out under the supervision of the Doctor attached to the Palaestra.

* * * * *

After the half-mythical Machaon, the earliest glimpse we get of an Army Surgeon is in the wars between Greece and Persia, about 450 B.C., when a doctor named Onasilos, with two of his pupils, volunteered to attend to the Greek wounded. It is evident that he carried out the work he had undertaken to the satisfaction of the authorities, for he was rewarded by a substantial gift of money and land. He must have had considerable difficulties to contend with. He had no bearers for the wounded; where the fighting men were willing or able, they carried the wounded on their backs from the battle-field to a place of safety, probably to some large house in the neighbourhood. While the battle raged we can imagine Onasilos going round to such of these as suited his purpose and making arrangements for the reception and treatment of his wounded. These must lie where they had fallen until night fell and the battle was over, and the victors had time and energy to attend to them. To carry a heavy helpless man for any considerable distance after they had been engaged in strenuous combat for many hours must have been a task not lightly undertaken by the warriors except for their particular friends. We can imagine Onasilos and his pupils

struggling to treat the most promising cases on the field, and to sort out those whose recovery seemed hopeful for transport to the hospitable houses awaiting them. Slaves and country people may have been pressed into this service, as they were at a later date. But it requires little imagination to picture the tortures of the wounded man thus jogging along over rough ground on the back of an untrained bearer. No serious injury would be likely to survive it.

The enemy's wounded, of course, would only need a grave. But it is noteworthy that later, when the Athenians were fighting Sparta, the people of Lacedaemon took the wounded into their houses, more or less irrespective of Clan or City, which was an advance on ancient practice.

Onasilos, and this public recognition of the duty of aid to the wounded, coincided with what is for us the crucial point of ancient medicine. Hippocrates (460-377 B.C.) belonged to the age of Pericles, the high-water mark of Greek culture. The Art of that day still remains the glory of the world, its architecture is our wonder, its government is our model, its citizenship our example. And to Hippocrates we owe it that its medicine exercised a paramount influence in Europe until the Middle Ages and after.

He was born in the Island of Cos, where there was a famous Aesculapian School, and devoted himself to the study and to the teaching of

medicine. In his celebrated "Oath" of the Aesculapian Guild, he shows such a very high conception of the duties and responsibility of the physician, that it is plain that the profession must have been even at that day of considerable dignity and antiquity; besides the definiteness of his medical dicta, the very large number of cases he cited bears witness to the length of time during which observations had been made and their bearing upon different problems reasoned out. Hippocrates not only raised the status of the physician, but recognized the fact that disease is governed by certain natural laws in the same way as life and health. From this followed the habit of precise observation and the taking of records.

His dominating theory of disease was the *humoral*, which has never ceased to influence medical practice. It may be briefly expressed thus: the body contains four *humours*, blood, phlegm, yellow bile and black bile: in health their distribution and proportion is well balanced, in disease it becomes irregular and disordered. In acute diseases these humours pass through a definite natural process, (*a*) crude: (*b*) coction, or digestion: (*c*) crisis, or resolution, in which they are expelled by one of the natural channels of the body. The duty of the physician, according to Hippocrates, was to assist and not hinder these ordered changes, so that the forces of the sick man himself might do battle with and conquer his

own ill-humours. Much stress is laid by him upon Prognosis, with which Diagnosis was bound up, or the exact foretelling of the onset and duration of each of the above changes.

Diet is noted as an important part of treatment, with rest and fresh air. He commends the use of a varied selection of drugs, two hundred and sixty-five being listed. Physiology and anatomy were scarcely taught and were surprisingly inaccurate; the impossibility of obtaining human bodies for dissection being the great stumbling-block to this study.

Of his authentic writings we have his treatises on "Ancient Medicine," on "Prognosis," on "Epidemics," on "The Treatment of Acute Diseases," and tracts on Joints, Fractures, Surgical Instruments, and on Head Wounds. Those on Fractures and Dislocations are excellent and might be of quite modern origin, that on Head Wounds stands only second.

I have given his theory in some detail, as summing up the Greek knowledge and practice, which dominated medical thought in Europe for countless centuries, and greatly influenced even the Arab School of Medicine which afterwards displaced it. And it is remarkable that all this ancient medicine expounded by Hippocrates had grown up outside the medicine of the Temples, which meant that it took its rise from the surgery of the Battle-field. His treatises on head wounds,

flesh wounds, and fractures are evidence of his close study of the results of the Greek hand-to-hand method of fighting.

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In Ancient Egypt medicine was under the charge of the priesthood, and showed a curious combination of drug lore with magic. The two side by side in a medicine so ancient as that of Egypt is an interesting illustration of the way in which, as Man progresses, the old faith in formulas gradually gives place to a new faith in nostrums. Wise men continue to use the one for the benefit of the mind while using the other for the body of their patients, who as a rule, like their religion old and their medicine new. To chant a formula for exorcising the disturbing demon from the stomach of the patient while giving a draught of nitre or cedar-chips, no doubt pre-disposed the sufferer to give the drug or diet its fair chance to effect a cure.

The first physician whose name emerges from the mists of the very far past was an Egyptian. Beside the pyramids of Sakkarah there stands a modest little tomb, that of Sekhet'enanch, Chief Physician to a Pharaoh of the Vth Dynasty (about B.C. 3533). On this tomb Sekhet'enanch and his wife are pictured. It is possible that though in later days medicine in Egypt was entirely in the hands of the priesthood, it may not have

been so in prehistoric times. There is nothing to connect Pharaoh's Chief Physician with the Temple.

The gradual absorption of all the lay elements, of the Law, of Philosophy, Science and Government, into the sacerdotal is the keynote of Egyptian history. And the reason why their medicine, though so old, was astonishingly unprogressive, standing practically still for forty centuries, may be found in this domination of the priesthood. But alongside all the daemonic systems of prehistoric medicine, most primitive peoples have possessed enough rude surgery to treat wounds from violence. Fractures, dislocations, and hæmorrhages have accompanied fighting in every age. There are on Monastery and Temple walls in Egypt representations of the wounded in battle having their hurts skilfully bandaged, and cupping vessels of cowhorn, lancets, forceps and knives have been discovered. Mummies with more or less roughly-healed fractures have been found, but bone-setting does not appear to have been a very specialized accomplishment. It is however interesting to note the frequency with which trephining was practised in prehistoric times. Not only in Egypt, but in places as far removed as France, Portugal, Bohemia, Peru and Japan, trephined skulls have been recovered from ancient burial places, usually with indications in the state of the bone that the patients had lived long after

the operation. It is possible that this practice went hand-in-hand with the theory of daemonic possession in sickness, especially in epilepsy, and that the little hole was carved in the skull to let out the evil spirit !

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There is little doubt that the Egyptians obtained their surgery from further East, for it had reached a considerable state of perfection in India, that land of perpetual tribal warfare. That surgery, which evidently was chiefly concerned with battle wounds and accidental injuries, should come from India to Egypt is an illustration of the contention that the composition of fighting forces has had a great influence upon the work of aiding the wounded. The first Regular Army on record is that raised by Rameses II., the Pharaoh of the Oppression, about B.C. 1322. This was found so superior in fighting value to the bands of irregulars hitherto driven to battle by the desire for loot, that some sort of standing or professional army was henceforth maintained in Egypt. In India, on the contrary, the fighters continued to be bands of raiders or of patriots, to the very dawn of the British Raj, and after. The health and healing of these was of concern to many in their own circle : the healing of the professional soldiers remained a matter of concern to few but their employers, since they were an excrescence, as

it were, upon the life of the nation as a whole. Ambulance work has always progressed when citizen armies have taken the field, and has retrograded where fighting has lapsed into the hands of professionals.

As with the Greek, so with the ancient Hindu knowledge of surgery, it is the writer of a book who puts us in possession of the practice of his day. Among the Sanskrit writings are two medical books known by the names of the two persons who compiled them, *Charaka* and *Susruta*. These books cannot be traced further back than the ninth century A.D., but the surgery and medicine described therein are so far developed as to indicate a long history hidden in the mists of an unlettered past; probably originating long before our Christian era commenced.

The Doctors held a position of superior dignity, which they owed to the Brahmanical Caste Laws. There was only one class of practitioner, no division being recognized between physicians and surgeons. The list of drugs they used is extensive, but they are all of home growth, the absence of foreign substances showing that their medical knowledge was indigenous and not imported. Arsenic, mercury, and zinc were known to them, and they made their salves and ointments upon a basis of *ghee* or clarified butter. The *Susruta* mentions over a hundred surgical instruments of steel, and lays particular stress on the necessity that they

should have "good handles and firm joints, be polished, sharp to divide a hair, perfectly clean, and be kept in flannel in a closed wooden box." Fourteen different methods of bandaging were used. Splints for fractures were made of thin strips of bamboo, bound together with string: this splint is still in use and has been adopted in the British Army under the name of the "patent rattan-cane splint."

Fractures were diagnosed by crepitus, as well as by their more obvious signs. Dislocations were reduced by manipulation, as at the present day. Flesh wounds were already divided into incised, punctured, lacerated and contused: cuts upon the face and head were sewed. The extraction of foreign bodies was done with great skill, and a magnet was used for particles of iron: poulticing and fomenting were employed to evacuate septic matter. Amputation was performed, but as in Greece it was rendered dangerous by the poor control they could exercise upon the hæmorrhage. The course of the arteries was not understood, the ends only could be treated. They were tied up, the stump plunged into boiling oil, to which pitch was sometimes added, and a clever cup-shaped bandage applied which maintained constant pressure.

Surgical operations were practised on a gourd or cucumber, tapping on a leather bag filled with liquid: lancing or puncturing on the hollow stems of

water-lilies, bandaging on artificial limbs, the sewing of cuts upon cloth. Physician-priests instructed their pupils from the very minute and precise directions in the *Sâstras*: these were excellent in their way, and the foundation was sound, but they gradually became much mixed with ritual, dogma, and magic, and being taught as heaven sent and unquestionable, led to the decay of medical science, since they stifled further research. For science can only live and grow in freedom.

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The interchange of medical knowledge which took place between Europe and the East began long before the Christian era, and its ebb and flow from East to West and East again is extremely interesting to note. The medicine of Asia and of Greece first met officially at the great medical School of Alexandria which was founded about 300 B.C. The conquest of Egypt by Alexander the Great, and his dispersal of Greek scientists, led first to the formation of the city of Alexandria, and then to the rapid growth of its Schools of Philosophy and Medicine. The brightest ornament of this School, and the next name that starts up from the pages of the Past for us, is Herophilus. He was a Greek of Chalcedon, a pupil of the Aesculapian Schools both of Cos and Cnidus, so he brought the pure Greek spirit to Alexandria. He was the most brilliant writer and teacher

since Hippocrates. He followed that master in his theory of humours, but went far beyond him in knowledge of anatomy. He is said to have been a bold operator, even upon the internal organs. This study was eagerly pursued and rapidly became scientific. There was probably much less religious prejudice among the Egyptians against the dissection of a human body. This was possibly first suggested by their practice of embalming, with its consequent interference with the internal anatomy of the subject.

In Greece, anatomy and physiology could really only be studied from the bodies of animals. There is in the Vatican Museum a model in marble of the interior of the human body which was evidently used for giving instruction in the medical schools. This model is apparently based upon studies made of a ruminant animal, and its variation from that of a human being is almost ludicrous. Skeletons were always much more easily procured than corpses, and ancient knowledge of bones was therefore more correct than of muscles or blood-vessels. But Galen, in his celebrated "Elementary Treatise on the Human Skeleton" gives details of the extraordinary difficulties he experienced, even in the second century, in getting to see one; and then he is evidently describing that of an Ape and not of a Man.

That animals were almost always used for this study is plain from Galen's curious advice to

students to drown, rather than strangle or cut the throats of, those animals they were going to dissect.

It was Herophilus who first recognized the value of greater exactness resulting from the dissection of human remains, and the Doctors of the Alexandrian School who first found means to secure this.

A story is told of a pupil of Herophilus which throws a sidelight upon the medical practice of the day, although it has nothing to do with Ambulance work. From ancient times the elder women had always acted as Accoucheuses, but as medical science progressed it was seen that a greater amount of knowledge than was possessed by these old women was required for the safe delivery of the child, and a law was passed forbidding any woman to act as a "medica." With the consequence that many women died in childbirth unattended, as they would not submit to the attentions of the doctors, who were often of rough manners, many of them being freed slaves. A young Athenian lady, Hagnodice by name, having seen the danger and misery of this state of things, cut her hair short, dressed as a boy, and attended the instructions of the physician Herophilus, and obtained her diploma without her sex being discovered.

Hearing of a lady who was facing unaided the perils of childbirth, she went to her, told her

story, revealed her sex, and successfully attended her. Her good deed being published abroad, the doctors of Athens stirred up a professional agitation and she was haled to the Areopagus. Here she told her story, and demanded that women should be allowed to study obstetrics and serve the needs of their own sex. This demand was supported by all the influential women of the city, and thus the first lady-doctor escaped death and secured the alteration of the law and the establishment of her sex in the medical profession. Other female ailments were added to the subjects studied by the "medica," who was very popular with her own sex, though the men were apparently regarded as more competent generally, and were always consulted in cases of difficulty.

The Greek doctors used to travel from place to place, establishing a connection in each, and thus the more adventurous extended their practice of medicine to fresh lands. Unlike other ancient peoples, the Greeks were enabled to travel safely among all the different tribes of their own race, because hospitality was a matter of religion, and all strangers were looked on as under the special protection of *Zeus Xenios*. In this way the medical science of the Romans was imported: doctors from the Schools of Greece, Asia Minor, and Egypt came to Italy to reap a harvest. Pliny the Elder boasted that Rome had lived six centuries without doctors, which was not strictly true,

though we know but little of them. That they had not lived without medicines we know from Pliny himself, who wrote of popular medicine and drugs in his "Natural History." He had a strong antipathy to doctors, but though their unpopularity was at first general, since they were a foreign importation, they received more recognition latterly.

The first Roman Doctor of whom we know anything was Celsus, a Patrician of the first century, who studied medicine as a branch of general knowledge, and does not appear to have practised except on his slaves or his immediate friends. He collected a large number of references to medical matters from older writers, and wrote the history of medicine to his own day. He described a large number of surgical operations, such as the amputation of an extremity, with minute detail: so we see War and the Wounded Man still contributing to the growth of science in the First Century.

It was in the Roman Army that Ambulance Work was first formally recognized as the concern of the Military Authorities, a notable advance thus being made. Hitherto the wounded man had given almost more in the way of information and experience to the surgeon than he had received in the form of treatment.

Each citizen soldier in the Roman Army was supplied with bandages, with which he could dress his own or his neighbour's wound. An Army

Surgeon was attached to each cohort, who wore the dress and carried the arms of the Legion, and these took rank with the Standard-bearers and Trumpeters. Eight or ten strong men were attached to each troop of from two to four hundred, whose duty it was to ride behind the fighting line and pick up the wounded. They had two stirrups on the left side of their saddles for the better transport of their burden, and were provided with bandages and water-bottles. They received a piece of gold for every man whose life they saved. After a battle, the well-to-do of the locality were expected to receive the wounded into their houses. Thus we see the Romans made a definite attempt to deal with our Three Problems: the dressing of the wound, the transport of the wounded, and their housing after the battle.

Even in Rome itself, in time of war there were no public hospitals arranged for the reception of the wounded, so that those who had no homes of their own available had to be quartered upon the charitable. Most of the doctors had houses in which they received patients, but these were for ordinary cases of sickness in time of peace.

English military medical history starts in the first century (A.D. 43), when the Emperor Claudius landed in Kent. The Senate rewarded him and his best captains with money and lands, and among their names we find Scribonianus Largus, *medicus*. This physician wrote a celebrated

treatise "On the Composition of Medicines," containing over three hundred formulæ, many of which were quoted by Galen a hundred years after. The *medicus* of a cohort was of good position, a "Roman of family rank," like the officers. There is a pathetic inscription at Chester-le-Street, the ancient *Borovicus*, which tells of the death in battle of one of these army doctors :

"Sacred to the Infernal Gods.

"Anicius Ingenuus, *medicus* in ordinary of the First Cohort of the Tungrian Legion.

"He lived twenty-five years."

This young man must have been conspicuous for bravery as well as for skill in healing. The Tungrian Legion, recruited on the banks of the Maese, was famed for its fighting qualities, and the First Cohort consisted of eleven hundred men, double the strength of the other Cohorts, and led the van in battle, guarding the Eagle.

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I must conclude this brief review of ancient practice with one more name. As Hippocrates was the central illuminating point of Ancient Greece, collecting all the knowledge of the past and making it accessible to his own generation and to their descendants, so we see Galen performing a similar service for Medieval Europe.

To Hippocrates the world owed the theory of medicine, and the inauguration of clinical observation; to Herophilus of Alexandria the systematic study of anatomy and physiology; to Claudius Galen of Pergamos the preservation of all that they had done. This celebrated physician and philosopher lived from 131-200 A.D. He studied in the schools of Smyrna and Alexandria, and travelled all over the then known world. He was a prolific writer on Law and Philosophy, as well as Medicine, and is known to have published some five hundred treatises, of which eighty-three on medicine have been preserved. These contain a complete and systematic review of Greek surgical practice, and the whole of the medical knowledge of the ancients, and formed the standard of the civilized world in anatomy, physiology, and the doctrine and treatment of disease for upwards of fourteen centuries. He emphasized the importance of anatomy, dissecting a great variety of animals, from an elephant to monkeys, mice and birds. He is said to have practised vivisection. In many respects the mental qualities of Galen were vastly inferior to those of Hippocrates; he lacked the brilliant originality of the great Greek doctor.

Though Galen tells many stories about his patients and his methods of treatment, he never gives a clinical history of a case of the type originated by Hippocrates and now taken down as a matter of ordinary routine by every student

of medicine. Hippocrates told stories of his cases for the instruction of his pupils, Galen either to support a theory or to show how much cleverer he was than his colleagues. A characteristic story relates how the Emperor Marcus Aurelius on his return from his first campaign against the Germans in 175 A.D., fell ill, evidently from the effects of good living after the meagre regimen of the Camp. Galen was sent for to the bedside of the suffering Emperor, where he found three Army Surgeons feeling his pulse, who pronounced him to be in the early stages of a feverish attack. On being asked his opinion, Galen said that he had no doubt that those who had been with the Emperor on his campaign would be the best judges of his malady. He adds: "On special command I felt his pulse, and finding it quite normal, considering his age and the time of day, I declared it to be no fever, but a digestive disorder due to the food he had eaten." As the Emperor quickly recovered on the simple treatment prescribed by Galen, he was henceforth enthusiastic in his praise of him as "the only honest doctor!"

Galen's work, though only a portion of it is of permanent value, was of inestimable worth to the Medieval world because he collected as if by a special Providence all those portions of Greek medicine most easily assimilated and made use of by his successors of a new type of civilization. "Had Galen's works been lost, there can be

little doubt that the dark age of medicine would have been darker and more prolonged than it was." (Withington.)

From him the greater part of European medicine has flowed, for he not only summed up the Greek practice, but to this added the contributions of the Egyptian and the Hindu.



A SURGEON IN ACTION.

From an engraved stone.

CHAPTER III

600-1500 A.D

Changing views on duty to the sick and wounded—Paul of Aegina—Battle surgery in Medieval Europe—Saxon leechdom—The Barber-Surgeon—Arab Medicine—Salerno—Master Pitard and other Army Doctors—Guy de Chauliac—The Organization of the Profession of Surgery—The Army Medical Services.

I NOW turn to another of the great periods into which my subject naturally falls. I have sketched the way in which the foundations of military surgery were laid; I have now to show the growth of a new attitude to the sick and wounded both in civil life and on the battle-field. The two periods, the Classic and the Medieval, are divided by the dawn of Christianity. The cleft between them is filled with that bright light which shined upon the darkness of a world in which a great Empire was tottering to its fall. New and savage peoples were appearing out of the dim mysterious lands which ringed the known world: the civilized communities grouped about the Mediterranean were threatened by the warriors

of northern Europe, Gauls and Goths and Huns, while the dark-skinned hordes of Asia and Africa threatened them from South and East.

It was at this moment of universal disruption that the new gospel of peace, and mercy to the weak and those fallen by the way, first preached in Palestine, spread the net of its subtle influence gradually and almost imperceptibly over the whole world. Its growth was slow, as the growth of all deep-rooted things is slow, but it was irresistible.

The two rival views of Charity that had hitherto flowed in distinct and separate channels, the Greek (summarized by Aristotle, 185-112 B.C.) and the Hebrew (as summed up by St. Paul), met and mingled in Christianity. To put it concisely, the Greeks had set the intrinsic value of the action itself first; the Jews had set the motive above the action. Hence St. Paul's famous chapter on Love, as a quality without which no deed however fine is fair. The actual effect of these two codes upon the progress of the world is clearly traceable; the Greeks, while striving for perfect accomplishment, built up an Art that is the glory of the whole Earth, and in medicine evolved a practice that was the standard for two thousand years; the Jews, striving for the development of personal character, left no such Art, but set an ideal before men that has never ceased to influence and mould succeeding generations. These two

opposing currents of thought met in Christianity, sometimes the one predominating, sometimes the other. After St. Paul, St. Francis of Assisi is the greatest exponent of the one view, while Aristotle was revived in the thirteenth century by the writings of St. Thomas Aquinas and others.

The Pauline view, though the highest in essence, did not act as so great a spur to achievement as the other; and as it spread through the Europe of the Middle Ages, it became, curiously enough, something of a drag upon the wheel of Knowledge, especially in the realm of Medicine, which was so closely allied to Charity. The more the relief of suffering was inculcated upon the religious, not for the actual benefit of the sufferer, but for the good of the soul of the benefactor, the more a high moral motive grew to be a cloak and an excuse for ignorance and apathy. The soul was thought to be so much more important than the body, that it behoved one rather to preach to the sick than attempt to deal with their sickness; to alleviate suffering rather than to cure it. This was a falling away from the teaching of Christ, but it is seen to have followed the domination of medicine by the priesthood and the religious houses in Medieval Europe.

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The history of Europe during these first centuries of our era is one of perpetual battles and

slaughter, and we see the wilful waste of life upon the battle-field still continuing, and Death reaping his awful aftermath. But the surgeons were at work. It is notable that here, as in the ancient world, War was the servant of Surgery. Now, as then, it tended to keep the operator free from religious control. How greatly the knowledge and practice of Surgery progressed in this, the Byzantine, period, is shown in the writings of Paul of Aegina (early seventh century). His services in bringing all the surgery of his day to a focus deserve to rank with those of Galen in the realm of medicine. His treatises were translated into Arabic and became the foundation of the Arab practice. Through the work of Albucasis, the Arabian, which were afterwards to be one of the chief sources of surgical knowledge in the Middle Ages, Paul of Aegina was to exert an influence over half the world for something like nine centuries.

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In Medieval Germany the Goths (third century) and the warlike peoples of Europe generally, made no provision for their wounded. The wives and daughters of the warriors attended to their hurts, and had considerable skill with herbs, salves, and the setting of broken bones. But their patients had to get themselves conveyed home as best they might. And after a fight those who

could not move had to be left in the huts of the neighbouring peasantry, where the character of their reception and treatment must have been a very doubtful one. A few adventurous quacks and healers may have followed in the train of invading bands, inspired by the hope of making profit out of attentions paid to the wounded. Hopeless suffering would have been untended by these, and poverty would have appealed to them in vain. We hear of certain regular practitioners in the "Nibelungen Lied," for "those skilled in leechcraft were offered silver without weight and bright gold for healing the heroes after the battle"; but this was after they had returned to their own homes again.

In the old German "*Gudrun*," the Odyssey of the North, there is told the story of an old warrior, Wate, who acted as Army Surgeon, "having learned leechcraft from a wild woman." He, having dressed his own wounds, attended to those of his comrades, applying a herb of miraculous healing virtues, and joining the cut flesh with a plaster which he carried with him in a box. The poet declares that he cured so many in this fashion that had he been with a very large army "it would have taken camels to carry all the gifts he would have got."

Further North yet we get a glimpse of the Norwegian method of dealing with their wounded. In 1030, in the great Sticklesand fight, when

St. Olaf received his death wound, the poet Thormod was struck by an arrow, which lodged deep in his side. He left the fight and sought shelter in a barn, where he found several women tending the hurts of other warriors. One of these came to his assistance, and with a pair of tongs tried to pull out the arrow, but failed to extract it. "Cut open the wound," said Thormod, "till you can get a good hold, and then let me pull." Thus he tore the arrow-head from his side, and large lumps of flesh were sticking to the barbs. "The King has fed us well, I am fat to the heart roots," cried the poet, and fell dead.

A few years later King Magnus the Great, of Norway and Denmark, defeated a great army of Wends near Sleswig. It was a hard-fought fight, and at the end of the day the King stood on the field, and his heart was wrung at the sight of the heaps of the slain, and the wounded who were paying the price of his victory. He looked for surgeons to minister to the sufferers, and was shocked to find how few there were and how incapable of dealing with the large numbers who needed them. He therefore appointed those of the soldiery who possessed the softest hands to set to work to dress wounds. It was said that St. Olaf, the patron saint of the good King, and the author of many miracles of healing, was present on the field and transformed these young soldiers into perfect leeches for the help of their heroic comrades!



From a drawing by C. Kenneth Bird.

THE BATTLE OF SLESWIG.

A legend of St. Olaf, who blessed the young soldiers, so that they became perfect leeches for the help of their heroic comrades.

[Facing page 46.]

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The death of an Army Surgeon at his work is recorded in 1289, when Rafn Oddson accompanied the expedition of King Erik of Norway to Denmark, and was struck by arrows no less than three times while tending the wounded on the field, in the back, the arm and the finger. And from the last he lost his life.

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In Saxon England the art of healing, known as *leechdom*, was almost entirely in the hands of the priests. The care of the sick was considered peculiarly the affair of the Church, as the ancient Greeks and Egyptians had considered it the business of the Temple Guardians. Which shows the prevalence among primitive peoples of the belief in the material or daemonic existence of sickness, to be exorcised by prayer or incantation. In certain ecclesiastical canons of the reign of Edgar (959-975 A.D.) curious analogies are drawn between sins and diseases, between the art of healing and spiritual cure. And it will be seen that England, being like Norway situated on the very edge of the civilized world, was some centuries behind the centre in mental development and scientific knowledge.

Here is one of their most effective treatments for a broken limb: "If shanks be broken, take bone-wort, pound it, pour the white of an egg out, mingle these for the shank-broken man. Lay

this salve on the broken limb, overlay it with elm-rind, apply a splint again ; always renew this till the limb be healed."

It will be seen that they used albumen for collodion, the soft inner bark of the elm for lint, and the supporting splint.

For swollen and inflamed wounds, "take a seed of dock and scotch wax," and "have the worts always there." To ensure the efficacy of the latter, it is said to be well to let the priest say twelve masses and add holy water to the prescription.

These seem to belong to the medicine of the battle-field. And we find Surgery then, as always, determined to hold itself free of ecclesiastical interference. It recognized that the wounded received their hurts far from the porch of their church, that the charitable Institution was full of civilian sick, and the whole concern of the Surgeon was on the battle-field, which was no place for priests. Surgeons must therefore be laymen, and the treatment of a wound must not be made conditional on a right spiritual attitude in the victim nor on the exalted motives of his benefactor. The Greek spirit spoke in the Medieval surgeon, little of the Greek as he seemed to have in him, for the dignity and high position of the Doctor of classic days was for the moment in eclipse. The triumph of this claim to freedom was seen when Surgery and the Church were

formally divorced by the Fourth Lateran Council of 993 A.D., which prohibited the regular clergy performing any operation of surgery "involving the shedding of blood," an order that has a hint of Portia in its wording.

The European Barber-Surgeon was the creation of this formal separation of Church and Surgery. The Barbers had intimate relations with the priesthood, which they owed to the custom of the "tonsure," and were skilled in the use of knives and scissors; thus they secured much of the work "involving the shedding of blood," which was forbidden to their patrons. Surgery then was limited, roughly, to bone-setting, tooth-drawing, cupping and blood-letting, and the dressing of accidental wounds. And it was not till the middle of the eighteenth century that Surgery was able finally to kick itself free of the Barbers.

Medicine was not dissociated from the Church by Authority till 1131 A.D., when the Sixth Lateran Council forbade monks and clergy to study "Civil Law and Medicine." Physicians, whether holding the priestly office or not, considered themselves superior to Surgeons, and looked down on them not only as men of inferior birth, as they were, but as inferior in skill and knowledge, which they very often were not.

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From the eighth century the Arabian conquest of Western Europe gradually progressed. As the Romans conquered Greece, and learned from the defeated the secrets of their medicine, so the Mohammedans found the Greek system of medicine established in Europe to be in many ways superior to their own derived from the East, and they assimilated it. Schools of medicine, often in conjunction with hostels for the sick, arose in the chief Moslem towns. At Damascus, Greek medicine was taught and practised by both Jewish and Christian professors. While Indian Doctors appeared here and at Baghdad side by side with the Greek, and the learning of East and West met to its mutual advantage. From the tenth to the thirteenth centuries the Arab system of medicine enjoyed a brilliant period in Spain. Albucasis, the Arab Physician of Cordova (eleventh century), was chiefly instrumental in spreading the knowledge of Arab practice in Europe by his writings; but much of his surgery was founded upon that of Paul of Aegina, whose works had been translated into Arabic some time before, and was thus derived from the Greek. Avicenna, another Mohammedan physician, compiled an "Encyclopædia of Surgery and Medicine," which embodied the same teaching. While the Arabs had been occupied in translating Greek and Latin medical works into their language, an industrious monk, Constantinus Africanus, probably of Arab extraction, made the first

translation of an Arabic work into Latin in 1050 A.D. The Moslems in this way returned to Europe what they had first obtained from her, and Hippocrates and Galen were still influencing the world's thought. The Arabs were retrograde in anatomy and physiology, and in their surgery showed very little improvement upon the Greek; they had much more to give in medicine, and in pharmacy and the use of drugs they made an important contribution to European knowledge. They compiled the first regular *pharmacopeia*, and gave Europe its Apothecaries' shops and the general outline of pharmacy which has only been modified by modern chemistry.

Hitherto each country had used the herbs and chemicals found within its own borders; doctors had obtained the raw materials of their craft from herbalists and collectors, and had dispensed their own concoctions. But now that an extended *pharmacopeia* was published and drugs advocated whose ingredients had to be obtained from far countries, professional apothecaries began the work of collecting these and making up prescriptions.

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The Arab conquest did not find Europe destitute of medical science, though it was unprogressive. Its practice was in the hands of the priesthood and the religious orders, and they served its interests in so far as they kept it alive, though they added

nothing to it. But there was one beacon light of science which burned brightly, the famous "Schola Salernitana." A Roman Colony had been established at Salerno, centuries before, on account of its healthy situation on the Italian coast, south of Naples. At the end of the seventh century a Benedictine Monastery is known to have been established near by, at Monte Cassino, but the celebrated medical school grew up outside this and was of a purely secular character. By the ninth century its physicians were famous, and it was the great cure-place of Europe till the end of the thirteenth century, by which time Arab medicine and surgery had superseded the older school of thought.

The writings of the School do not show much originality, being modelled upon the works of Hippocrates and Galen. Its best known publication was an anonymous rhyming Latin poem on health, *Regimen Sanitatis Salerni*, which claimed to have been written for the use of the King of England (probably meaning Robert, son of William the Conqueror). It enjoyed a very great popularity in the Middle Ages, and was translated into most of the European languages. The importance of the study of anatomy was as little understood by the Professors of Salerno as by the Ancients, for their lectures on physical structure were given on swine, owing to the impossibility of obtaining a human body for demonstration

purposes. Even the dissection of animals might result, at that time, in a charge of practising the heathen arts of divination.

There is on record an order made by the Emperor Frederick II. in the thirteenth century, no doubt at the instigation of the more enlightened of the professors—very possibly Mondino, who has been called the Father of Anatomy—that a human body should be dissected by responsible students at least once in five years. But since post-mortem examinations were not unknown in the thirteenth century, it is not unlikely that human remains were secretly dissected more often than official records would lead us to suppose.

Pharmacy was well cultivated at Salerno, and there were hospitals there in which the observation of patients and collecting of records could be carried out, and clinical work taught, nursing being scarcely separated from medicine at that date. The School of Salerno was only finally dissolved by Napoleon in 1811, and there is no doubt that it performed a valuable work in its day, as a Bridge between ancient and modern science.

Among the great men who sought health there was William the Conqueror, before his invasion of England in 1066.

The earliest recorded case of a patient marrying his nurse comes from Salerno. That Robert of England, to whom the "Regimen Sanitatis" was dedicated, was wounded in the Crusades, and

on leaving the Holy Land he was landed at Brindisi and proceeded to Salerno to be cured by its famous physicians. Here he was the fortunate recipient of the ministrations of the Princess Sibylla of Apulia, from whom he received "an incurable wound of the heart," in addition to his other ills; and the story ends by his marrying her and carrying her off to England with him.

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There was another famous Medical School in Europe at this time, that of Montpellier in France. This was founded in 1025, and its rise to fame coincided with the slow decline of Salerno. It was a rallying point of the Arab and Jewish learning, as opposed to the pure Greek of Salerno.

But a definite and very important step in the organization of the profession was taken in Paris with the founding of a College of Surgeons known as the "Collège de St. Côme," in 1279. This was the work of Pitard, who had accompanied Louis IX. of France upon his expeditions to the Holy Land in the Crusades of 1249 and 1270. It was entirely independent of ecclesiastical control or influence, as was to be expected of the scheme of an Army Surgeon. It was therefore quite distinct from the medical faculty of the University of Paris, already a prosperous seat of Learning.

This Master Pitard distinguished himself by his advocacy of a method of treating wounds

introduced by his predecessor, Theodoric, Bishop of Cervia. He was the son of a celebrated Physician, Hugh of Lucca, and himself became surgeon and "pœnitentiarius" to Pope Innocent I. He used wine as a lotion, and applied a simple dry dressing to wounds, in opposition to the surgeons of the day, who held that suppuration should be encouraged by salves and ointments.

His method received no general recognition until Pitard took it up and used it with excellent effect, both in the hospitals in Paris and on the many military expeditions he accompanied. It was still strongly opposed by all the physicians, but Pitard received the support of Count Charles of Valois, who had seen the remarkable cures he had achieved among the wounded in the army.

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Medieval Europe had gone back upon the Roman plan of attaching a "medicus" to each cohort of soldiers, but though the armies of the eleventh and twelfth centuries were without organization for the care of the fallen, Doctors figured in the train of the Princes who led them and the great Barons who brought detachments of men-at-arms.

These were no doubt originally chaplains, with a knowledge of medicine; thus combining the care of their patron's soul with attention to his wounds and the power to shrive him when his hour had come. As surgery made good her claim

to be free of Religion, and it came to be recognized that the presence of the surgeon was called for on the battle-field itself, a new position in the train of princely followers and dependents was occupied by the Healer.

We can trace the names of several of these secular surgeons. Besides that Pitard who followed Louis IX. to the Holy Land, there were two Doctors who accompanied William the Conqueror on his invasion of Great Britain. Their names are given in Domesday Book (1086) as being rewarded with estates in the conquered country. Gilbert Maminot being called *Presbyter et medicus*, was evidently a doctor of the older type, who acted as Chaplain to the King as well as being instructed in medicine. Being of noble family, he probably occupied a position of considerable importance, and would have been ready to attend the King himself if indisposed, but would not have accompanied the army in the field. The more modern type of Army Surgeon is represented by the other, Nigellus, *medicus*, who was certainly a layman, and his name may be taken as that of the first Army doctor in England. We can see that he followed the fortunes of the Army, because for his services he received lands successively in Hants, Wilts, Hereford, and Shropshire. And that he served the needs of the barons and commanders of the King's forces as well as the Royal Household is shown by the records of estates bestowed

upon him by them. He appears to have passed from one service to another, and to have served in the train of Count Roger of Montgomery in 1086. He was probably of Continental birth and training.

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The Crusaders were more inspired by religious fervour than by common sense, and the absence of Doctors and an Ambulance Organization, and even of a Commissariat service, led to fearful sufferings and waste of life in their ranks.

A curious method was in use at this time of disposing of the bodies of distinguished persons who fell in battle on foreign soil. Their bodies were boiled and the bones extracted and brought home to their native land for interment. The Princes and nobles who went to the Holy Land with the Crusading Armies used to take among their camp furniture a huge cauldron in which, in case of death, this process could be carried out. The bodies of many eminent people who perished far from home were thus treated: among them St. Louis of France and Philip the Bold. The practice came to be regarded with no unnatural repugnance at a later date, and was prohibited in 1300 by a bull of Pope Boniface VIII.

A story is told by several historians in great detail of the wounding of Prince Edward (crowned Edward I. in 1270) at the siege of Jaffa. An assassin

struck at the Prince with a poisoned dagger. He caught the blow on his arm, wrested the dagger away, grazing his own forehead as he did so, and plunged it in his assailant's heart. "The wound in his arm appearing dangerous and likely to gangrene, the Prince thought fit to make a will; but the bad flesh being cut away by an English surgeon, it was healed in little more than a fortnight" (Carte). The dagger was probably not poisoned with anything more deadly than ordinary dirt, and the wound being a deep puncture involving the bone, must have required incisions to allow of the escape of septic matter. The name of the surgeon does not seem to have been preserved with the story of his exploit, but he exercised a beneficial influence upon the wounded in the Prince's later wars. For it was probably his own dramatic restoration at the hands of this man which led him, when King of England, to appoint an official medical service to accompany his expedition to Scotland in 1299-1300. It was on this occasion that the title *Chirurgien*, or surgeon, first appears in English records, even if it were found earlier on the Continent.

The status and pay of these first Army Doctors is shown by the Accounts of the Marshall's (War) Office. We find there one physician with two juniors or assistants, and two surgeons with one or two assistants each; also an apothecary. That some of these appear also in the Household

Accounts shows that they formed a permanent nucleus of an Army Medical Service. In time of War, the physician and the surgeons received the pay of simple knights, two shillings a day, and ranked as such. Their juniors and assistants received one shilling a day, the pay of the mounted lancers. The surgeon was allowed the sum spent by him on medical appliances both in the Field and at Court, and the physician was allowed one shilling a day subsistence money if he was not taking his meals free at the King's table. They were allowed the keep of their saddle-horses and of the pack-horses of the principals.

In the "Roba," or Household List, we find the Doctors taking an annual allowance on the second scale, eight marks, which indicates their social position to have been that of Knights. They received the same daily pay as an Admiral of the Fleet, and their juniors and assistants the same as ships' captains. Forty years later, when Edward III. led his Armies into France, it is evident that the Doctors who accompanied the forces were only those in personal attendance on his barons and their private contingents, for no medical staff such as that detailed above appears in the "Roba" Accounts. There is only one record which gives us a glimpse of the surgeon at his work with this Army, and that is a note to the effect that the "Welsh," or native British, a contingent of whom were fighting in the ranks for the first

time, were accompanied by a "medicus" of their own race.

Edward III. showed a high appreciation of civil Doctors and did a good deal to improve their status.

Two men stand out at this time as distinguished servants of surgery. John Arden (1349-1370), a self-taught man, was the first English writer on surgical operations and the treatment of wounds. He took his subject more from the civil than the military standpoint, but his work is instructive as showing the greater importance that was now being attached to science and skill in this branch of medical work.

But the most distinguished and cultivated of the surgeons of the fourteenth century was Guy de Chauliac. He was a man of good birth and position, pursuing his studies at Bologna under the famous master Mondino, at the Medical School of Montpellier, and in Paris.

Mondino has been called "the Restorer of Anatomy," and his pupil de Chauliac, "the Restorer of Surgery." He did as much to dignify the office of surgeon as to improve the practice of surgery itself. He complained bitterly that both the surgeons and physicians of the day so neglected their general education that he would not be surprised to see "carpenters and tanners deserting trade and taking to physic." His works on surgery marked a great advance in general

knowledge of the subject, while he frankly admitted the debt he owed to Galen and to Albucasis, whose writings he largely quoted. For, he said, "we are like children on the neck of a giant, who see all the giant sees and something besides." His elaborate system of treatment for fractures and dislocations was comprehended under the not very applicable name of "Algebra," and many things appear in it that have been thought to be of more recent origin. He advised the stiffening of bandages by dipping them in white of egg: he suspended fractured limbs in a kind of cradle: treated fractures of the thigh with long splints and a pulley and weight attached to the foot: and he is said to have originated an object commonly seen in our hospitals to this day, the rope hung over the bed by which the patient can help himself up.

He filled the honourable post of Surgeon to three Popes: Clement VI., Innocent VI. and Urban V., from 1352-1378.

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The founding of a company of Barber-surgeons in 1308 was the first considerable attempt to regularize this profession and to ensure that its neophytes possessed the skill they claimed. In London, in 1354, there was a celebrated trial in this connection, when a Committee composed of a Prior and three Surgeons were directed to

“make inquest of the results of treatment, by John le Spicer, of Cornhill,” of a severe wound of the jaw. And the result of their investigations was that the victim of the injured jaw was “apparently incurable through want of skill” on the part of John le Spicer. How he was penalized for this failure of his treatment does not transpire. From his name it seems probable that he was really an apothecary and no barber-surgeon, and he had most likely obtained such rude skill as he did, or did not, possess by following the army. This case would appear to have been got up by those who had submitted to a more scientific education, jealous for the reputation of their profession and anxious to put an end to the escapades of self-taught and irresponsible persons.

This Company of Barber-surgeons enjoyed a flourishing existence for many years: it was given a Charter as a College in 1462, but the Barber-surgeon inevitably declined as the civil surgeon grew in importance, and a shrewd blow was struck at his bubble reputation in 1540, when a decree was published for the public protection, ordering that: “No person using shaving or barbery in London shall occupy any surgery, letting of blood, or other matter, except only drawing of teeth.” The Company of Barber-surgeons was partially dissolved after this, and wholly disappeared from view in 1745, when the London College of Surgeons received its first Charter. The Edinburgh College

of Surgeons is much older, having received its first Charter from James V. in 1505.

A decree of 1513 exempted all the Surgeons in London from bearing arms or serving on juries. At that date there were only thirteen practitioners registered as Surgeons.

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The popular attitude towards the Doctor, more especially the Army Doctor, in the fourteenth century, may be judged from Chaucer's "Canterbury Tales." His "Doctour of Phisike" presents a by no means unimposing or negligible figure. Chaucer undoubtedly made his observations with the Army in France, in 1360, when he did his military service, being then thirty-two years old. And at Court he was brought into intimate relations with Master John Paladyne, the King's Court Physician and one of the principal Army Surgeons of the day.

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Under Henry V. the organization of the Army Medical Service made a notable advance. Not only do we find the name of Master Nichol Colnet, physician to the King, as being present at the Battle of Agincourt (1415), as in former wars, but we find that, along with the military preparations for the war, the medical service was actually thought of. Master Thomas Morestede, Surgeon

to the King, was commissioned to form a surgical staff for the attendance of the wounded, which was to be entirely under his own control, and to be administered in the interests of the troops and at the public expense. The Doctors of this staff were to be engaged on contracts lasting a year. Civil surgeons were thus temporarily attracted to the military service, and were permitted to return to their civilian work at the expiration of their contract. They received the pay of Esquires, one shilling a day, or eighteen pounds five shillings per annum, and their assistants and followers had half that amount, or the pay of a mounted man. A bounty of two pounds four shillings and fourpence halfpenny per man was added for each year of service in an enemy's country. The attraction of this service does not appear to lie in the liberality of its pay. Morestede was Surgeon to three kings of England: Henry IV., V. and VI. Henry V.'s death at Vincennes in 1422 was caused by some surgical trouble.

The first attempt to organize a medical service for the French Army in the field was made by Charles the Bold, who was Duke of Burgundy from 1467-77. His army of twenty thousand men was divided into companies of eight hundred, to each of which he appointed a Barber-surgeon. It was recognized that as the method of dressing and bandaging wounds was very complex, a surgeon could not deal with a great number of cases.

CHAPTER IV

1100-1480 A.D

The work of the Monastic Houses—The Nursing Orders—St. Bart.'s and St. Thomas's, and other hospitals—Leprosy and Lepers—The Dissolution in England—"The Queen's Hospital."

HAVING followed our "Ambulance Problems" in and out among the jumble of isolated facts that form all the material to be found on this subject in the Literature of the Middle Ages, we have seen the importance of Problem I.—the first treatment of the wounded—gaining gradual recognition. We have obtained some idea of the development of surgical practice both in classic and in medieval days: and we have seen the organization of surgery as a profession and the establishment of a military medical staff. Problem II.—the transport of the wounded—was not tackled seriously till a much later date. But the working out of Problem III.—the housing of the wounded after a battle—marched side by side with Problem I. These two were in more or less intimate relation with civil life: the

experiences of peace could be utilized upon the battle-field, and the establishment arranged for the one could be adapted for the other. The transport of a large number of wounded men was a purely military matter. Neither religion nor science were ordinarily concerned with this, so it was relegated to an inferior place and was suffered to remain undealt with. Its enormous importance in relation to the success of the others was not realized till much later, in the Great Awakening of the nineteenth century.

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The early Christian Bishops had organized a system of Parishes, under priests, deacons, and archdeacons, and around these centres the works of charity, the relief of poverty, the care of the widows and orphans of those fallen in war, and the housing of the sick poor, were grouped. At first the widows were attached to the Churches as Church workers and were regarded as a charge upon the Parish; but from the fourth century, when marriage had come to be looked upon as an evil and a degradation, and the marriage of the clergy was prohibited, the joining of regular religious bodies which provided shelter and sustenance became the necessary resort of these widows as well as the very large number of spinsters who required some provision. Up to the time of Charlemagne (742-814) the Parochial system

predominated, especially in England, but gradually from that date the endowed Charitable Institution superseded it. These exerted a special influence upon the history of medicine. For the State or Civic charity of the later Greek and Roman civilizations, a religious and voluntary charity was substituted. The very spirit of the cloister being conservative, medicine was unprogressive on its scientific side, but it advanced in the direction of organization. "Nursing," as distinct from diagnosis and prescription, had its inception in the medieval monastery.

The "Hospitals" then changed their character. In the Byzantine period the "Hospitalium" was defined as a "house of God in which strangers who lack hospitality are received," temporarily, that is : but under St. Basil of Caesarea (330-379) it was made for the first time a resort, not only of those who "visit it from time to time as they pass by, but also for those who need some treatment in illness." Thus the Christian hospitals grew out of the Inns or Rest-houses attached to Churches, and became places for the treatment of the sick in much the same way as those grouped round the Greek Temples. And the spinsters and widows who sought the shelter and safety of the Cloister found an occupation in tending the sick inmates of their House.

The great revival of piety in the eleventh century led to a remarkable increase in the number of

hospitals as distinct from convents, and to the better treatment of the patients, though this was still what we should consider very elementary. In England alone there were as many as seven hundred and fifty hospitals, exclusive of monasteries and friaries. Many of these were dedicated to some special purpose, for the old and infirm, for cripples, for the blind, for lepers. No fewer than two hundred institutions were for the reception of lepers. Few of these would be included under the dignified title of "hospital" in these days: they were in most cases merely a hut, or a collection of huts, in which the lepers were congregated and where pious brethren attended to their needs, and the charitable gave them food. The principal Hospital Orders were those of St. John of Jerusalem (founded eleventh century); The Brothers and Sisters of the Holy Ghost (1198); the Sisters of St. Elizabeth (thirteenth century); the Beguines and Beghards (about 1175); and the Franciscans (1208), who nursed in the homes of the poor.

The oldest English hospital which is still consecrated to its original use is St. Bartholomew's, Smithfield. It was founded on its present site in 1102 as a religious house by Rahere, minstrel to King Henry II., as an act of piety. Twenty-five years later he completed his gift by begging a further grant of land from the King, on which he built a Hospital "for a Master, brethren and

sisters, and for the entertainment of poor diseased persons till they got well : of distressed women big with child till they were able to go abroad : and for the maintenance till the age of seven of the children whose mothers died in the House." From this we must conclude that in Rahere's opinion seven was the age at which mediæval men and women became self-supporting !

At the time of the dissolution of the Monasteries by Henry VIII. St. Bart.'s had one hundred beds, with one physician and three surgeons. It was handed over to the citizens of London, and given a Charter, in 1547. It was rebuilt in 1729, and it now has six hundred and seventy-four beds.

After its re-establishment as a hospital for the sick, its staff included a Matron and twelve nursing sisters. These had more of the standing and work of servants, or ward-maids, than of the highly accomplished "sisters" who direct the work of its wards to-day. In Protestant England nursing remained a more or less menial occupation until the day of the Great Awakening. In Catholic countries it was not quite the same, since nursing was entirely in the hands of the religious sisterhoods then, as it remained almost to our own day, and all classes met in the Cloister. The Sisterhood of St. Vincent de Paul, founded in 1633, is still the largest Nursing Institute in the world. That there was no lack of aspirants for the work of nursing is evidenced by an order of the Governors of the

Hôtel Dieu, Paris, dated 1578, directing the Prior "not to receive henceforth any novices without speaking of it to the Company, because there are an excessive number of nuns and novices who cause great expense to the said Hôtel Dieu."

St. Thomas's, another of our great hospitals which was originally attached to a religious foundation, was established in the Borough by Richard, Prior of Bermondsey, in 1213. When it was rebuilt on another site in 1228 it had a Master, brethren and three lay sisters, with forty beds for "poor infirm and impotent people." It was surrendered in 1538 and purchased by the Mayor and Citizens of London in 1551, when it was reopened with two hundred and sixty beds. It was built on its present site in 1871, after several moves, and to-day has accommodation for five hundred and eighty-two in-patients.

There is one other kindred institution in England which has been kept sacred to its original charitable purpose all through the centuries, and that is Bethlehem, a Priory founded by Simon FitzMary in 1247. After the Dissolution, in 1547, it was given by Henry VIII. for the housing and care of Lunatics.

A hospital older yet is the Hôtel Dieu in Paris, dating from the sixth century. From 586 onwards the city of Paris was the scene of many dire calamities and epidemics. Bishop Landry was a shepherd not insensible to the bodily sufferings

of his flock, and it is recorded of him that during a severe famine he actually sold the Church plate to relieve the poor. And in company with St. Eligius, he founded the Hôtel Dieu for the reception and treatment of the sick poor. This was for centuries the chief source of clinical experience to the medical students of Paris University.

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In those days piety and kindness were more conspicuous features of hospital life than skill and science. In the early days the sick were only laid on straw pallets: bedsteads of wood were not introduced till late in the twelfth century. With an idea of economizing floor space or bedding, or both, these beds were made distressingly capacious. It is on record that the bedsteads of the Hôtel Dieu were all made either for two or four persons. The Decree dedicating the hospital to the public service forbade the authorities to refuse admittance to any sick person, and in 1773 it is said that there were more than five thousand patients in its wards.

About that date Louis XVI. visited the hospital, and was horrified to see four and even six people suffering from serious illness crammed into one bed! Several smallpox patients in one, three or four women in labour in another, and several surgical or clinical cases in different stages of

infectiveness laid together in another. He endeavoured to put a stop to this criminal overcrowding by a Decree, but failed in his object, so hard is ancient practice to overthrow.

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The very general consumption of rotten meat, decayed fish, and bread made from blighted corn, was a great cause of sickness among medieval peoples : and that the food supplied to the hospital patients was not above suspicion is shown by a Statute appointing that to the sick in Sherbourne Hospital only fresh meat be supplied, and on no account the flesh of an animal that had died of disease !

Godfrey de Vinsauf, a chronicler who went with the Army of Richard I. to the Holy Land, describes the "sickness of a dropsical nature" which decimated the troops there : and bears witness to the abominable foods which the soldiery were driven by hunger to consume.

The sicknesses and skin complaints which resulted from this unwholesome living, and the dirty habits of the people, were no doubt often confused with leprosy, which may partly account for its extraordinary prevalence during three centuries, and its gradual disappearance as sanitary arrangements improved. Leprosy raged in Europe from the eleventh to the middle of the thirteenth centuries, when it abated, and was rarely seen after the

fourteenth. The ancient idea that it was brought from the East by returning Crusaders is not well established, but vast epidemics seem to have often coincided with wars, and the gathering together of great hosts in one place. The name of Leprosy was given to many skin complaints, some tuberculous, such as lupus, some scrofulous, which were not leprosy proper, owing to imperfect diagnosis. The popular attitude to this terrible disease had been one of shrinking from the loathsome sights attendant on the ravages it wrought upon the human body, and neglect and cruelty to the unfortunate leper had insensibly resulted. But there was originally no fear of infection, as its contagious properties had not been recognized. In the twelfth century a change in popular feeling took place. The example was set in England by Queen Maud (about 1101), who visited the lepers in the lazar-houses and in their poor huts on the outskirts of villages. She tended them, dressed their repulsive sores, and fed them. The Abbot of Battle, and Hugh, Bishop of Lincoln, were likewise prominent in this new movement of mercy. It was even acknowledged by the Lateran Council of 1179 that an unchristian spirit of selfishness had hitherto been exhibited towards lepers. At the same time, the fact that it was an infectious disease and spread by contact, was generally appreciated, and led to stricter laws being passed on the subject of segregation.

The first leper inmate of a hospital whose name has been preserved for us was a certain Orm, a Yorkshireman, for whom the Abbot founded a little asylum near Whitby, where he could spend his days in peace, receiving food and drink from the Abbey.

The fourteenth century was a distressful time for hospitals. There is always much difficulty in keeping up very old-established institutions when the first enthusiasm which led to their founding has died away, unless they change their character to suit changing requirements. Poverty led not only to the closing of many hospitals and lazaret-houses, but to neglect and hardship for those who sought shelter and treatment in them. The "Black Death" of 1349 found neither Science nor the Institutions ready to cope with it: its effect on the lepers and the sick poor must have been practically that of extermination in England, where it is certain that from one-half to two-thirds of the total population perished!

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Hospitals and the Nursing Orders had always been very popular with the English people, and the dramatic events of the sixteenth century were not intended by them to have the effect they did upon these Institutions. The public had become jealous of the wealth and power of the Church

and the Ecclesiastical Houses, and when Parliament and People agreed to hand over the Religious Houses, including the Hospitals, to "the King and his Heirs for ever," they were under the fond delusion that these institutions would be held in trust for the public good, and the wealth of the Churches used for the benefit of the poor and the sick. This was done in the case of St. Bartholomew's, St. Thomas's, and Bethlehem, as we have already noted: but the riches of the rest proved too tempting a prize, and most of it disappeared into the exchequers of the King and his Favourites.

In England most of the lazar-houses had fallen into disuse and ruin owing to the disappearance of the disease, long before the sixteenth century, and the Dissolution. In Sweden they survived the Reformation, and were used for leprosy and other infectious diseases. In Denmark, the Dominican and Franciscan Friaries were turned into hospitals for the poor, and the leper-houses into isolation hospitals. In France the impoverished and retrograde religious hospitals were reorganized and taken over by the Bourgeoisie and administered for the public weal.

Thus we see that the Monastic Houses had made Problem III., the housing of the sick and wounded, a matter peculiarly their own. The hospitals attached to Priories and religious foundations were of gradual but almost universal growth, starting

from the "Infirmaria" for sick brothers and sisters, and enlarging the scope of their hospitality till it embraced the sick poor generally.

As these endowed charitable institutions had sprung up all over Europe, it followed as a matter of course that after a battle the wounded drifted naturally into the hands of the pious monks of the neighbourhood, and would fill to overflowing their hospital establishments. It is only by the record of an isolated case here and there that one can distinguish the general practice of ancient days, and it is only when there is anything particularly arresting about a case that it is recorded: one must fill in the less dramatic details for oneself. For instance, an indication of this drift of the Wounded to the religious houses is found in the archives of Brackley, where it is noted that after the Battle of Bannockburn (1314) a man was taken in who had had his hand cut off by the Scots. The barbarous mutilation of a prisoner by the Scots was what the monkish chronicler recorded, but we read from this that the monastic hospitals were transformed into military hospitals when War was at work in their neighbourhood.

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It is a woman's name which next stands out from the pages of history, a woman's hand which carried the Work of Mercy its next step farther. The first organized Ambulance service was the

creation of a woman, Isabella of Castile, wife of Ferdinand of Spain, whom she married in 1469. The sufferings of sick and wounded soldiers touched a heart ever open to the appeal of distress. The earnest piety of this great Queen is not open to question, and from our point of view one of its finest fruits was "The Queen's Hospital." It is described in great detail by the historian Hernando del Pulgar.

"For the care of the sick and wounded, the Queen sent always to the camp six large tents and their furniture, together with physicians, surgeons, medicines and attendants, and commanded that they should charge nothing for she would pay all."

The Queen's Hospital was present on the field during the siege of Granada, and Peter Martyr eulogizes its work. "Four huge hospital tents, the careful provision of Queenly piety, are a sight worth seeing. They are intended, not only for the wounded, but for those labouring under any disease. The physicians, apothecaries, surgeons, and other attendants are numerous, and order, diligence and the supply of all things complete. . . . Every sickness and casualty is met and provided for by the Royal bounty, except where Nature's appointed day is at hand."

Pedro Bosca records that the Queen's Hospital comprised nearly four hundred wagons with awnings, and that the wounded were not nursed

by the highly improper persons who usually follow armies, but by honest and competent matrons. These four hundred wagons were named "*ambulancias*," probably the first use of the name, which, though mentioned in English literature of the early nineteenth century, was not taken into general use till the Crimean War, which saw the French Ambulance wagons instituted.

Several remarkable facts shine out from this story. Fresh evidence of the parlous state of the wounded in those days is found in the emphasis laid on the "order and diligence" of the service, the decency of the matrons who did the nursing, the "completeness" of the supplies, which probably included food and drink. The inclusion of those sick of any disease was another epoch-making event in the history of Ambulance Work. At one bound, the active mind of this pious Queen had reached an understanding of the needs of the wounded which it took the rest of the world four more centuries of waste and agony to attain. Having seen the need, as others may have seen it, she devised the method of meeting it, as her descendants failed to do, even with her example and experience to guide them. The Ambulance Service she provided had the advantage of mobility: it could follow the army and treat the wounded where they fell. Its base hospitals were not the insanitary huts or houses of the country people, but large tents, planted in the best and

most convenient situations. The advantage of an independent transport service for medical stores was realized by her. The transport of the wounded was evidently catered for, since we may be sure that some of those wagons with awnings, when emptied of the tents and furniture, were used to collect the wounded and convey them to the hospitals.

The strange and tragic thing about it is that this should have been an isolated effort. That this scheme should have blossomed and come to full growth: its blessings appreciated by hundreds, its fame spread by the chroniclers of the day, and then—nothing more.

Its wagons fell to pieces, its hospital tents decayed, its Doctors and nurses grew old and died. And wounded men lay for days and nights where they fell, as before: and a handful of Doctors and Barber-surgeons and devoted nuns laboured in the shambles of the battle-field, and in the Churches and cottages that did duty as hospitals.

And the "Queen's Hospital" might never have been. It must seldom have happened in History that so great and beneficent an invention is brought into actual being and is seen at its useful work, and then vanishes from the minds and the lives of men, to be born again after four hundred years, amid the chaos of the Napoleonic Wars, and the European conflicts of the nineteenth century.

CHAPTER V

THE ORDER OF ST. JOHN OF JERUSALEM

1014-1798 A.D

The Founding of the Hospital—The Institution of the Order—Removal to Acre—The Siege—Fortifying Rhodes—Institution of the European Langues—Assault and fall of Rhodes—Malta—The final repulse of the Turks—Napoleon and the Order.

THERE are two events of paramount significance in this history that I have set out to tell, two events of the utmost meaning and influence: the Founding of the Order of St. John of Jerusalem, and the Signing of the Geneva Convention. As the Geneva Convention of the nineteenth century was the outcome of a burning pity and horror of the waste and agonies of War, so also was the founding in the eleventh century of the Hospital of St. John at Jerusalem and the institution of the Order of Knights Hospitallers. Both upreared standards of witness to the sacredness of suffering. The influence of such a witness upon the course of the world is immeasurable:

our slow journey across the deserts of human frailty towards perfection would be the less certain for the lack of these signposts beside the way. What things our brothers have wrought and died for in the past must appear to us worthy of our utmost service and loyalty. The faces these old ideals turn to the world may change from age to age, but since the present is heir to all the past, we may well point to the Geneva Convention, and those who have given life and fortune to further its aims, as the direct descendants of the founders of the Knightly Order publicly vowed to the service of the Sick and Wounded. Religion and Knowledge bore a great part in creating the ideal, and it was in each case their handmaid War who brought it to fruition by her most stern compulsion.

The seventy years that preceded the calling of the International Conference at Geneva were years of unparalleled conflict between the great powers of the world, between the old and the new order of Government, and the blood shed in those years clamoured for the hand of mercy to stanch the wounds of the future.

And the Order of St. John of Jerusalem was instituted in those years when the struggle between the Cross and the Crescent convulsed Western Europe. Christianity had conquered heathendom. In Europe and all the borders of Asia and Africa impinging upon the Mediterranean, Christian

kingdoms were established. The Christian world was so far settled and secure that the unity of a perilous past had given place to a great schism, and already the Eastern and Western Churches were divided. The Greek had its headquarters at Constantinople, the Pope of the Western Church was at Rome. Syria was then under the dominion of the Greeks, and Jerusalem itself full of Churches and convents, which had sprung up since the first Church of the Holy Sepulchre had been built by Helena, mother of the Emperor Constantine, in the fourth century.

At this juncture a new power arose in the East. Mohammed began to preach when he was about forty years old, in the first decade of the seventh century. The "Hegira," his flight from Mecca to Medina, took place in 622 A.D., which forms the first year of the Mohammedan calendar. His doctrines spread with extraordinary rapidity. It was as though men were waiting with held breath for just such a message. The fiery gospel blazed across the deserts of Arabia. Sword in hand, the followers of the Prophet subdued Syria, Palestine and Jerusalem; then the whole of Northern Africa, thence to the Islands of the Mediterranean and Spain; finally attacking and capturing the very stronghold of Christendom, Constantinople, the capital of the Greek Empire, in the fifteenth century.

This combat between the Cross and the Crescent



From a drawing by C. Kenneth Bird.

A KNIGHT OF ST. JOHN.

[Facing page 82.]

for possession of Europe could not but be productive of significant results. The world-history of this period is one of the most remarkable pages in the whole book of the past.

The Greek Empire, weakened in spirit and temper, was quite unable to stand up against the fanatical hosts of the new faith. By the beginning of the eighth century its Asiatic possessions were being torn from it one by one. Palestine and Jerusalem had fallen to the Moslem, and the sacred shrine was in the hands of the infidel. The pilgrims who flocked there were not refused admission to the Holy City by its astute rulers, but they had to pay for the privilege of entry, and proved a source of great profit.

These pilgrims faced the unimaginable discomforts, delays and dangers of medieval travel cheerfully enough, they paid large sums for the priceless privilege of entering the Holy Places of their faith, they bore the insults and contempt of the stiff-necked Arab rulers, for the Hope that was in them. But when the Moslem world was divided against itself, and the Caliph of Baghdad wrestled with the Caliph of Egypt for possession of the Holy Land, in those days of tumults, excursions and wars, the condition of the pilgrims grew more serious.

Caravans of travellers would be fallen upon by marauding bands and robbed of their goods, and might find themselves at the Gate of Jerusalem

without the price of entry in their hands, and would have to turn away and retrace their long and painful journeys without a sight of the sacred spots they had come so far to adore. Or they would fall ill, exhausted and spent by the difficulties and perils of the way, and find no one to care for them in their poverty. When the barbarous Turcomans swept down out of the fastnesses of the Caspian and Western Asia, and in turn harassed the Moslems, the plight of the pilgrims was piteous indeed. The prey of every savage band of warriors, wronged, betrayed, robbed and murdered, the pilgrims at last found a champion in Peter the Hermit.

For the most part humble, pious folk, inexpressive, welcoming hardship for their faith's sake, they had told the tale of their wrongs and sufferings to but a small circle of hearers, on their return to their own lands. Until the man of destiny appeared in their ranks, with the eye to see, and the heart to pity, and the will to voice their complaints.

Since Jerusalem had always been under the ægis of the Greek Empire, the religious organizations within the city had naturally been those of the Eastern Church. A good many Greeks had now become subject to the Caliph of Egypt, and were allowed, among other privileges, to build houses in Jerusalem to which their co-religionists could go for shelter and food. As the breach

grew wider between the Greek and Latin Churches, it led to the exclusion of the pilgrims who came from the countries of Western Europe from any benefits which were available for the Greeks, who hated and despised them. It was these Latin pilgrims who were in the most miserable situation, and it was for them that certain merchants of Amalfi, good men touched by the spectacle of such unmerited suffering, opened a small hospital for their entertainment. Merchants from Europe were established in Palestine, and did a very thriving and lucrative, though sometimes precarious, trade with the East. The great Caravan Routes from India and Baghdad passed through Damascus and Palestine to the sea, and thence to Europe. This company of Amalfi merchants from the kingdom of Naples were engaged chiefly in trade with Egypt, and through this had ingratiated themselves with the Caliph of Egypt, who then held the Holy Land. By means of liberal presents to the Caliph and his Court, they purchased permission to build their first little hospital for sick and wounded pilgrims close to the Church of the Holy Sepulchre. From this modest beginning, in the year 1014, the great foundation of St. John of Jerusalem afterwards grew. Of their own generosity and from alms collected for the purpose by the pilgrims, the merchants added a little convent Church dedicated to St. Mary ad Latinos, and there is a charter for

the re-endowment of this Church dated 1023. It is thus evident that this work had first a medical and then a religious foundation, and the benevolent work of tending the sick and injured has never since been neglected by this Order.

As applicants for admission continually thronged to the doors of the little hospital, it was necessarily extended. Two great hospital buildings were added, one for women dedicated to St. Mary Magdalene, one for men dedicated to St. John the Almoner; but at some time about the middle of the century the patron Saint of the hospital was changed to St. John the Baptist. Many a pious pilgrim remained here to work among the sick in the wards, the work grew apace, fine buildings were springing up in the Square to the South of the Church of the Holy Sepulchre, and funds were flowing into the coffers through the pilgrims who returned to their own countries spreading abroad its fame and singing the praises of its impartial charity.

It was at this juncture, in 1065, that the Turcomans of Tartary descended like a cloud upon Palestine, wrested Jerusalem from the Saracens, and committed the most horrible and revolting cruelties upon the population, both Christian and Moslem. Torturings, murders, and outrages of unimaginable brutality followed. All the principal buildings of Jerusalem were destroyed, although the Church of the Holy Sepulchre was spared to be a source of profit to the conquerors.

It was in these critical times that Peter the Hermit undertook the pilgrimage that was to have such dramatic results. Although it had suffered with the rest of Jerusalem, he found the Hospital of St. John still in existence, and quietly carrying on its work of mercy, under the direction of Gerard, its able administrator. Aflame with zeal, the monk set out on his self-imposed mission of arousing Europe to a sense of shame that such scenes should be permitted to defile the Holy Sepulchre of the Lord of its Faith. He went in vain to Constantinople: the Byzantine Empire was itself tottering to an ignoble fall. But armed with letters from Gerard, he presented himself in Rome. The Pope of the Western Church bestowed unqualified approval upon his mission, and sent him to all the principal Courts of Europe, preaching his Holy War. Impatient of the delays and jealousies that hampered the Powers, he started off himself for Jerusalem at the head of an expeditionary force. Ill-equipped, ill-armed, undisciplined, starved, endowed with much religious fervour but little knowledge of war, this expedition was doomed to disaster. Many perished by the way of hunger and hardship; the rest were quickly dispersed or slain by the lances of the Saracens, who once more ruled in Jerusalem. But these lives were not given in vain. Inspired by the valour and enthusiasm of this untrained band, the Knights of Europe, with their fighting men,

gathered together before Constantinople, and the First Crusade, under the leadership of Godfrey de Bouillon, was carried to a successful issue with the taking of Jerusalem in 1099.

This was the turning point in the fortunes of the hospital of St. John; and Gerard was the man to prove equal to the great moment when it came. Its doors were thrown open to the wounded Crusaders, and for the moment it became a great military hospital. It was already known to the Crusaders as the organization which alone had made pilgrimage possible to Latin Christians in recent years, and one can imagine how eager they were to visit this little outpost of Christianity in the heathen world. Gerard, the Rector who had steered its fortunes so skilfully through the dark and dangerous days of Moslem rule, must have watched the approach of the Crusading hosts and awaited the issue of their attack with the poignant eagerness "of those who wait for the morning." The issue meant more than life or death to him and his co-workers: it meant the rescue of the Holy Places of their faith, or the triumph of the powers of darkness and the uttermost disaster to the work that they held so dear.

One of the first acts of the victorious Godfrey de Bouillon was his visit to the Hospital; few more dramatic and significant meetings are described in the pages of history. Two of the ablest of rulers and statesmen, inspired by the most exalted

motives that can move men, clasped hands in the gateway of the Hospital. Godfrey flushed with victory, Gerard worn with long anxiety, both with the light of a new dawn in their eyes. And all around them in the great vaulted halls of the hospital buildings lay those who were paying the price of victory. Many of those wounded in the great assault were already there, and a stream of victims was still being carried in, the sick and wounded seeking shelter and treatment where they had heard it was to be found of the best. The Christian armies had made practically no provision for their wounded ; hardships and starvation had brought a fearful train of sickness, and the discovery of this asylum of healing in the heart of the enemy's stronghold seemed like a miracle.

His heart tender in the hour of his triumph, Godfrey was so struck with the beauty of this work of mercy that he bestowed upon the Hospital his own manor of Montboise, in Brabant. Many of the other Leaders followed his example, and presented to Gerard the title deeds of properties all over Europe. And thus the benevolent work received an unexpected impulse, many in the ranks of the Crusading Armies, knights and monks and humble serving men, aflame with religious zeal, taking up their abode in the Hospital and working with unflagging energy among the sick and wounded. While the gifts of the faithful enabled a large Church to be built and dedicated to

St. John of Jerusalem, and many beautiful and noble buildings to be added to the establishment. Gerard's genius for organization proved equal to turning the situation to the best account. From the new Christian kingdom of Jerusalem he obtained a Constitution for a new Order of Chivalry, the Order of the Knights Hospitallers of St. John of Jerusalem, who to the usual conventual vows of poverty, chastity and obedience, added the prime duty of caring for the sick.

Pope Paschal II. formally established the Order in 1113, and dedicated it to the service of Mankind. Its habit was a black robe with a cowl and a cross of eight points (four arrow heads reversed) in white linen upon the left breast. And its motto: "Pro Utilitate Hominum."

In the Order, as finally organized, there were three classes. In the First Class, *Knights of Justice*, who were required to give proofs of noble descent and to have already attained knighthood before they could be enrolled in the Order.

In the Second Class, the ecclesiastical division of the Order, were two distinct grades: *Conventual Chaplains*, who fulfilled the religious functions of the Order at Headquarters, and *Priests of Obedience*, who carried on the same work in the branch priories and commanderies of Europe.

In the Third Class were the *Serving Brothers*, divided into Servants-at-Arms, who acted as

esquires to the full Knights, and in time became Knights themselves if eligible ; and Servants-at-Office, of humble birth, who performed the duties of domestic servants. Even these last enjoyed many privileges and emoluments which made admission to the Order a benefit eagerly sought after.

Gerard was the first Grand Master of the Order, with an Advisory Council or Chapter. For the administration of the various manors and lands which had become the property of the Order all over Europe, Gerard appointed Commanders to act as Stewards, and collect the dues of the Order. Later, he established branch hospitals in many of the European ports and on the lands of the Order, to act as collecting and rest stations for pilgrims, where they could be received and cared for on their way to the Holy Land ; and gradually these Commanderies became institutions where the same work was carried on as in the parent hospital, the nursing of the sick poor and the training of postulants being combined with the management of the estates and the transference of their profits to Headquarters.

Gerard's successor as Grand Master of the Order was Raymond du Puy, a man of strong and energetic character. He saw that the Order which had been founded during the first natural reaction after a long and fierce struggle, when

the blessings and works of Peace appeared more desirable than all the glories of War, was changing its temper. The Knights who had laid aside sword and lance to labour among the sick in the wards were casting longing eyes again at the armour they had so gladly put by. To the duty of tending the sick and wounded, he therefore proposed to add the duty of bearing arms against the infidel in defence of their faith. The proffered aid of the swords of the Knights Hospitallers was eagerly accepted by Baldwin, King of Jerusalem, who was struggling to maintain his little kingdom against the repeated attacks of the Saracens, and the Patriarch accepted the new oath of the Order.

The first appearance of the Knights in action was in 1119, when the Turcomans besieged Antioch and were repulsed by the army sent by Baldwin from Jerusalem for the relief of the town, an army reinforced by a contingent of the Order of St. John of Jerusalem.

The military constitution of the Order was perfected by 1128. After that, wherever men bore arms against the infidel, there were the Knights Hospitallers to be found.

At this time the group of buildings which formed the Headquarters of the Order in Jerusalem was at the height of its beauty and dignity, and humming with ordered activity. It stood upon "a plot of ground nearly square, about five hundred feet a side, which is bounded on the north

by what was formerly the Street of the Palmers, now known as the Via Dolorosa; on the west by Patriarch Street, now Christian Street; on the south by Temple Street, now David Street; and on the east by the Malquinat, or Bazaar. Within this area stood the later buildings of the Order. North of the Street of the Palmers and to the east of the Church of the Holy Sepulchre, stood the Church and hospitals of St. Mary ad Latinos and St. Mary Magdalene (also ad Latinos), the original establishments of the Amalfi merchants. To the south of the Street of the Palmers, in the west angle of the Square, stood the Church of St. John Eleemon (the Almoner) and its hospice" (Porter).

After the establishment of the Christian kingdom and the consequent security of the Order, the Church of St. John Eleemon was enlarged and became the splendid conventual Church of St. John the Baptist. To the east of this another large Church was added, Santa Maria Majora, with a monastic quadrangle attached to it. And along the whole south frontage of the square, facing into Temple Street, ran the great pile of the Hospital of St. John.

When Jerusalem was recaptured for the Crescent by Saladin, in 1187, he turned the Church of St. John into a madhouse (Turkish, *Muristan*).

There is a story told of Saladin that, hearing tales he could scarcely credit of the marvellous

goodness and generosity shown to the poor patients who sought the aid of the Hospitallers, he determined to see for himself if these things were possible. Disguising himself, he obtained admission to their hospital (probably the one at Acre). When food was placed before him he refused to touch it, and on being pressed for a reason, he admitted to being obsessed by a strange fancy, so strange that its satisfaction was impossible. His kindly hosts urged him to ask for what he would, and they would grudge no effort to procure it for him and ease his sad plight. He then explained that the one thing he could eat would be the forefoot of the Grand Master's charger, cut off in his presence. They told the Grand Master in haste, who immediately ordered his steed to be brought in and its foot cut off, if this would save the life of the starving man. When Saladin saw the splendid animal and the hasty preparations for its sacrifice, he cried out that it was enough, his fancy had changed and he could eat what they would set before him. From this time he is said to have given an annual contribution to the funds of the Order in acknowledgment of their marvellous charity. And when he took Jerusalem, though he ordered the evacuation of their beautiful buildings, he granted them permission to continue in residence for a whole year to carry on their noble work.

Thence they migrated at length on a black day in

the annals of the Order to the fortified town and castle of Margat, which they held against all the attacks of the Saracen armies. On the taking of the important seaport of Acre by Richard Cœur de Lion in the Third Crusade (1192), their headquarters were established there, from which it derived its new name of St. Jean d'Acre. From this time forward the warrior Knights of St. John formed one of the bulwarks of Christianity against the repeated assaults of the heathen world. In every siege, with every army, their gallant and incorruptible band was the very backbone of the Christian forces. Although not without enemies to accuse them, the honour of the Knights and their unceasing loyalty to their vows, was triumphantly vindicated whenever their envious traducers were brought to book. They seem to have been singularly free from those jealousies, treacheries, and corruptions which at times played such havoc with the arms of the Christians.

In 1259 Pope Alexander thought that the Order was at a disadvantage for want of a special distinguishing habit, since worthless outsiders could pass themselves off as Knights Hospitallers without any qualification, so he ordered the Master and Brethren to require all Knights of Justice to wear the black mantle with the white linen cross on the left breast, "that they may be distinguished from the other brethren," and in battle to adopt a red surcoat with cross of white.

The King of Hungary described the good works of the Order after visiting several of their principal establishments. "Lodging in their house, I have seen them feed every day an innumerable multitude of poor, the sick laid in good beds and treated with great care, the dying assisted with an exemplary piety, and the dead buried with proper decency. In a word, the Knights of St. John are employed, sometimes like Mary in contemplation, sometimes like Martha in action, and the noble militia consecrate their days either in the infirmaries or else in engagements against the enemies of the Cross."

Further interesting testimony to their worth is given by a not impartial witness, Thierry, Grand Master of the rival Order of Knights Templars, who wrote to Henry II. of England: "The Turks have laid siege to Tyre ever since Martinmas; a great number of military engines play upon it night and day, throwing in continually square stones of vast bigness. Young Conrad, son of the Marquis of Montserrat, has shut himself up in the place and makes a gallant defence, being well seconded by the Knights of St. John and the Templars. On the Eve of St. Silvester (December 30th), seventeen Christian galleys with these brave friars on board sailed out of port with ten Sicilian vessels commanded by Captain Margarit, a Catalan by nation, and boldly attacked the fleet of Saladin before his eyes. The infidels were

defeated. The great Admiral of Alexandria and eight Emirs, were made prisoner. They took eleven ships and a great number ran aground on the coast, which Saladin set on fire and burnt to ashes, for fear they should fall into the hands of the Christians."

This gives the first glimpse of the Order in naval warfare, at which they afterwards became so strikingly adept, attaining the position of Maintainers of the Peace of the Mediterranean, a position which they were only to vacate in favour of Great Britain, who has succeeded to their honours and their anxieties.

After the loss of Jerusalem, the city of Acre, which had fallen to Richard Cœur de Lion in the Third Crusade, became the capital of the Christian kingdom in the East. It was already one of the most beautiful cities in the world, and when the crowned heads of Europe and the great and wealthy Military Orders made it their headquarters it was full of noble buildings. The Kings of England, France, Spain, Portugal, Denmark, Sicily and Jerusalem all had their separate quarters of the city, as well as the Knights Hospitallers, the Templars, and the Teutonic Knights.

At this time the property of the Order of St. John of Jerusalem is estimated by Matthew Paris to have been as much as nineteen thousand Manors,

while the Templars owned nine thousand. There was considerable jealousy between the two Orders, especially on the part of the less favoured Templars, and they even went to the length of having recourse to arms against each other. The luxury and licence in Acre, where seventeen different nations and languages were congregated, and each ruled as it pleased its own people and troubled nothing about the rights of any outside its own quarter, went beyond the bounds of decency. The city was a sink of iniquity, and there was no supreme head to enforce acknowledgment of authority. The red flame of war was required to purify this plague-spot.

In 1291, Melec Seraf gathered together a huge army for the siege of Acre, some one hundred and sixty thousand infantry with sixty thousand horsemen. To this great host the holders of Acre could only oppose twelve thousand soldiers and about two hundred Knights Hospitallers and the same number of Templars. The fame of their heroic defence of Acre has echoed down the aisles of the past, and still has power to stir the blood to-day. It is one of the notable defences of history, and especially for the manner in which those who might have been supposed enervated by vice and luxury acquitted themselves in the hour of trial. Foremost in this defence were the Knights Hospitallers, under John de Villiers, the Grand Master. When the last days of the siege

arrived, and the capitulation of the starving town was inevitable, "the Grand Master and his few surviving Knights," we are assured, "left no combatants behind them when they had fought their way to their boats and hoisted sail in their galleys for a port of refuge in the Island of Cyprus" (Bedford and Hölbeche). Cyprus proved but little suited to their needs, for it was practically indefensible against attack: and one of the first activities of the newly-arrived Order was the building of a strong fleet of galleys with which to secure themselves against the depredations of the pirates of all nations with which the Mediterranean was infested. Thus the Order of necessity took upon itself the great naval mission which it only finally relinquished under the compelling hand of Napoleon Bonaparte.

In 1310 they moved again. Under Grand Master Villaret they attacked the island of Rhodes, then the property of the Greek Emperor Andronicus, who had refused to give it to the Knights. A force landed here, and after some difficulties and opposition from the inhabitants, partly Greek and partly Saracen robbers and pirates, they obtained possession of the whole island. They fortified the city of Rhodes, and took possession of all the small islands near, clearing out the swarms of pirates which they harboured. They also devoted themselves to the work of releasing the Christian captives who laboured at

the oars of these pirate galleys, and in those of the Saracen oppressors. They brought them for succour to Rhodes, and afterwards assisted them, when they wished it, to return to their own people. They protected the commerce of the Mediterranean, while their hospitals always provided the best medical skill and attendance available at that day. Thus they never lacked adherents, nor eager volunteers for their ships, the building of their fortifications, and their armed forces.

They built churches and hospitals, besides forts and castles, on the island, and once more enjoyed the security of a settled existence. Another circumstance added to their wealth and power at this period, the dissolution of the Order of Knights Templars. Originally instituted to guard the Temple of Jerusalem, when the Holy Land was given into the hands of the Infidel the Templars considered their mission at an end, and proposed to live and enjoy life upon the wealth and properties owned by them in Europe. The ostentation and arrogance of the Order was its downfall: its past virtues and services were forgotten: jealousy and avarice had marked it for their prey, and no doubt exaggerated its sins and offences to justify its ruthless extermination. Pope Clement V. and Philip the Fair, King of France, took the lead in this cruel campaign, and the Kings and nobility of Europe joined in, falling gleefully upon so rich a spoil. The Order was declared to be dissolved,

and the individual members of it were put to death with every ingenuity of cruelty.

It is said that the strong and warlike Hospitallers were saved from a like fate by their power. Remaining in the East as they did, in constant peril from the infidel, they had not enjoyed the luxury that enervates in spite of their great wealth : and their devotion to the original purpose, of the Order, the nursing of the sick and the service of mankind, kept them strong and pure.

Thus they escaped any such fate as fell upon their rivals, and when the Pope intervened to prevent the entire secularizing of the Templars' property, he conferred much of it upon the Hospitallers, who appeared to have deserved it, by their loyal adherence to the original vows of their Order, and their continued residence in the East.

They were evidently well known for their work among the wounded on the battle-fields of Europe, for in the fourteenth century Guy de Chauliac wrote a treatise on the methods of the surgeons preceding his day, in which he speaks of " Germans, soldiers, and those who follow the wars, who use incantations, potions, oil, wool, and cabbage-leaves." Here he was probably referring to the Knights Hospitallers and the Teutonic Knights.

It was now, in the beginning of the fourteenth century, that the European possessions of the Order were regularly divided into *Langues*, under delegated authority. There were seven of these,

the Langue of Provence, Auvergne, France, Italy, Aragon, England, and Germany. Aragon was afterwards subdivided into Aragon and Castile, which embraced Portugal. The chief dignitaries of the Order, resident at Headquarters, were each made ruler of one of these Langues, under the name of Conventual Bailiffs, while keeping their former titles and position on the Privy Council of the Order. The Grand Commander thus became the Conventual Bailiff of Provence; the Marshall, Bailiff of Auvergne; the Grand Hospitaller, of France; the Grand Conservator, of Aragon; the Tucopolier, or Commander of the Cavalry, of England; the High Bailiff, of Germany; and the High Chancellor, Bailiff of Castile. Each Langue had its own Auberge or lodging-house, and offices, in Rhodes: and they became exceedingly powerful in the councils of the Order, as well as in the independent management of their affairs.

The English Langue was of very early foundation. During the reign of Henry I., in 1101, the Order was established in Clerkenwell, on the very spot which is still its headquarters to-day. This was made a Priory in 1185, and flourished exceedingly. There were countless commanderies all over England, that administered the large estates belonging to the Order: which was so popular in the character of landlord that an Act of Parliament was actually passed to restrain those who

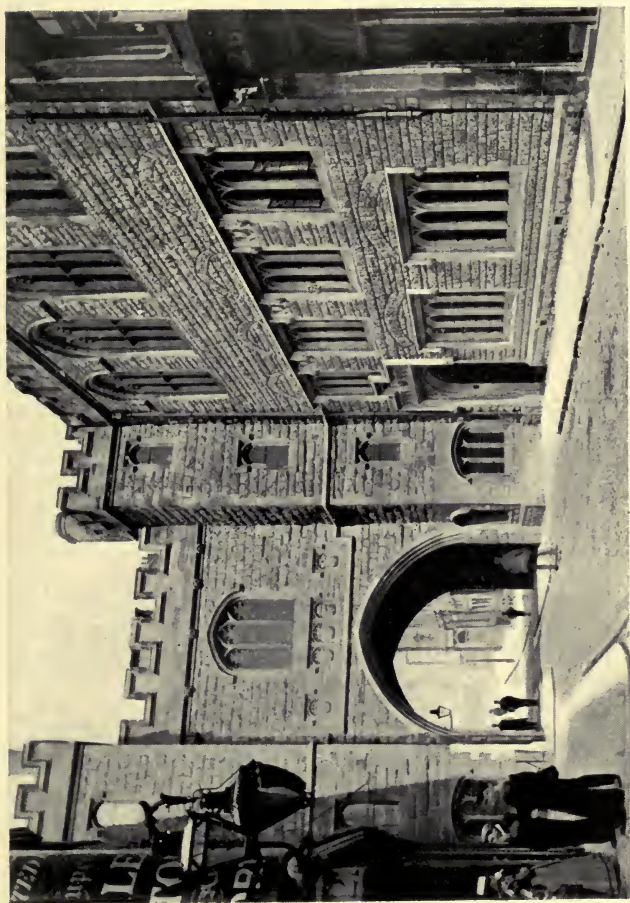


Photo by H. W. Fincham.

ST. JOHN'S GATE, CLERKENWELL.

The Headquarters of the Order of St. John of Jerusalem, in England, from the 12th century.

[Facing page 102.]

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set up Crosses on their lands and houses, when they were not rightfully tenants of the Order, in the hope that thus they might obtain the privileges of those who were! In 1180 the Priory of Buckland in Somersetshire was founded for the Ladies of the Order. And in this famous Priory the Ladies and Serving Sisters attached to the Hospital at Jerusalem took refuge after the fall of the city had resulted in their expulsion from Headquarters. The Chaplain and Steward of this Priory were always appointed by the Order. The Sisters followed the rule of St. Augustine.

We hear an echo of past proprietorship in "St. John's Wood," which was a deer-park adjoining the Priory of Kilburn, once the home of an independent sisterhood attached to the Order: they were expelled in 1536, and their property confiscated by the King.

It is noteworthy that the organization of a system of State Relief, in the reign of Elizabeth, was rendered necessary by this suppression of the monastic houses, whose benevolent work had to be taken over by the secular guardians under the "Poor Law." They had formed centres of relief and provided trained workers to administer it: in their hospitals they had tended the sick and in their rest-houses they had given poor wayfarers lodging, the "three days rule" being general all over Europe.

Most powerful and most popular among the

hospital Orders in England was the Order of St. John of Jerusalem. The original buildings in Clerkenwell were very fine, but they were all destroyed by the mob under Wat Tyler, in 1381; the only portion which survives is the crypt of the Church. One hundred and twenty years was occupied in the gradual rebuilding, which was only completed by Thomas Dowcra, Prior in 1504. His gate-house stands at the present day.

Upon this flourishing branch of a mediæval Order, busily sending out its emissaries to curb the dangerous ambitions of the conquering Turk in eastern Europe, labouring for the relief of sickness and misery at home, there broke the cloud of a King's wrath. In the storm that involved all the religious houses in England, Henry VIII. showed a peculiarly bitter animosity against the Knights Hospitallers, probably attributable to the Protest of the Order against his divorce of Katharine of Aragon. Their lands were confiscated, their charitable institutions were closed, their good works were prohibited, their members were banished.

When Catholic Mary ascended the Throne in 1556, the Hospital of St. John of Jerusalem in England was re-established by letters patent under the Mastership of Sir Thomas Tresham: which was an act of justice, seeing that it had suffered thus severely for its protest against the divorcing of her mother, Katharine of Aragon.

The whole of the fifteenth century was occupied by the Order in a relentless struggle with the encroaching Turk. The rapidly waning power of the Byzantine Empire, the Schism in the Papacy, and the consequent weakening of the temporal powers of the Christian Church, gave the Turks their opportunity. They had taken most of eastern Europe out of the enfeebled hand of the Greeks; Palestine had gone, Asia Minor, Egypt and North Africa; Spain was quickly going to the Moors; Austria and Italy itself were threatened. Smyrna, the last stronghold of St. John of Jerusalem on the mainland, fell to Tamerlane, the great Tartar chieftain, and all the Knights there perished by his sword. Rhodes seemed to be the last bulwark against the victorious arms of the infidel. The whole of Europe owed a debt of gratitude to the band of Knights and their followers, whose dogged courage held back for so long the flood of Turkish conquest and drew upon itself the fiercest onslaughts of this almost invincible foe. For then, as now, the Turk was ruthless in victory. A train of horrors and desolation, mutilations, and exterminations followed in his wake across a conquered country.

The first serious assaults upon the stronghold of Rhodes were delivered by the Sultan of Egypt, who unsuccessfully attacked it in 1440, and again in 1444. Then Mahomet II., King of the Ottomans, took his bold resolve to capture

Constantinople, and finally destroy the Greek Empire, and to this end he gathered an enormous army, provided with the newly-invented siege guns, and every device of fifteenth century warfare. Thus Constantinople fell, and Europe seemed to be at his mercy. But the fleets of the Knights of Rhodes were harassing his galleys, releasing his prisoners, and repelling his assaults. He resolved to put out this fire that continually singed his whiskers.

To Peter d'Aubusson the guidance of the Order through the anxious days of preparation for the great Turkish attack was entrusted, and he was in many ways the greatest and most able of all the distinguished soldiers and diplomats who as Grand Masters have steered the Order to pre-eminence. He was a clever engineer and a practical chemist, making his own gunpowder; a brave soldier and able commander; and one of the most capable doctors in the wards of the Hospital.

He sent out an urgent summons to the Warrior Knights of the Order all the world over to come to the assistance of Rhodes and bring money, supplies and arms, while he strengthened the fortifications and prepared to sustain a siege. The great Turkish fleet eventually appeared off the Island in 1480, and the siege lasted three months. After losing some nine thousand killed and fifteen thousand wounded, they gave up the costly attempt

to reduce its indomitable defenders to submission : and thus the forces of the Crescent were checked in mid career, rolled back from the rich lands of western Europe on which they were casting greedy eyes. Baffled and enraged, the Ottoman Sultan set about collecting another army to fling against Rhodes, when his death occurred in the following year, and obtained for the Hospitallers a long respite from attack.

In 1522, when L'Isle Adam was Grand Master, the next great blow was struck against Rhodes. Under the able superintendence of the engineer, Martinengo, the forts were strengthened, double and triple lines of fortifications were drawn round the city, with large towers along their length, a deep ditch or moat, and batteries of heavy guns set at frequent intervals. Here six hundred Knights with four thousand five hundred men-at-arms prepared to receive the whole weight of the Ottoman arm. The first well-delivered blow shook, but it did not dislodge them : so, the assault having failed, the Turk sat down to starve out the garrison. The siege lasted six months, at the end of which the Grand Master and his remaining Knights and serving brethren and dependents, nearly five thousand in number, embarked in their fleet of galleys and quitted Rhodes, after the Order had held it for two hundred and twenty years.

For some difficult years the Knights were homeless, and the lack of a settled headquarters led to

confusion and disorder : and these were among the stormiest years through which the Order passed.

It was on the plea that the Order had ceased to have a corporate existence that Henry VIII. confiscated the properties of the English Commanderies, a final betrayal that is said to have broken the heart of L'Isle Adam, who died four years after the migration.

It was after some hesitation that Malta was accepted from Charles V. of Spain, and the Order established itself there in 1530. The sixteenth century was occupied by it in fortifying Malta and in suppressing piracy in the Mediterranean. Its fleets rapidly increased in number and in fighting value.

Another of the notable defences of these faithful guardians of the Cross took place in 1565, when La Valette was Grand Master. The Turkish Fleet, carrying an army of thirty thousand men, with a train of siege guns, some throwing marble shot of fifty-six pounds weight and even heavier, appeared off Malta. The principal harbour, now known as Valetta, was then divided by a promontory on which stood the fortress of St. Elmo. For a month this fortress withstood the whole force of the Turkish assault, falling at last, when its walls were battered and crumbling, and only a tiny force of wounded and weary Knights was left to capitulate. They knew that day must be

the last of their resistance, and carried their wounded out on to the walls that they might die sword in hand. This defence cost one hundred and twenty-three of the best and bravest Knights of the Order, and one thousand five hundred fighting men : but it saved the island from attack for a whole month, while the works were being strengthened and provisions laid in.

After indescribable struggles in which victory seemed to incline now to one side and now to the other, the Turks were at last beaten off, and were finally forced to give up the attempt to reduce the island. But this great attack cost the lives of two hundred Knights, about three thousand soldiers, and seven thousand of the inhabitants of the island.

It is impossible to form any exaggerated notion of the significance of this successful defiance of the Moslem power. It is one of the most memorable sieges in history. If Malta had fallen, what power would have succeeded in saving Sicily, Italy, and indeed all southern Europe ? Sea power was in the hands of the Hospitallers, and that is the keynote of the rule of the Mediterranean. It was this constant menace from the sea, this hawk-like blow that could be delivered without warning upon his galleys and transports, that alone curbed the power of the invincible Turk.

For years successive Grand Masters had been urging the Sovereigns of Europe to sink all their

differences and unite to crush the foe who menaced all impartially. In 1571 Europe was stirred by the unspeakable atrocities committed by the victorious Turks on the taking of Cyprus from the Venetians, and was at last induced to combine for their destruction. A large European fleet, with the galleys of the Knights of Malta, met the Turkish navy at Lepanto, and utterly routed it. So signal a victory had never before been achieved on the ocean. The Turkish commander was slain, and thirty thousand men lost, while three thousand officers and men were taken prisoner. No fewer than twenty thousand Christian captives of war and conquest, who were rowing in the galleys, were thus set free, and the limit of Moslem rule in Europe was finally set.

Although during the whole of the seventeenth century Malta was forced to wage perpetual warfare with the aggressive Moslem, and at intervals in the eighteenth, the struggle was no longer a life and death one for the Hospitallers. In 1723 the Turks made their last ineffective attempt to reduce Malta, but failed once more.

The most striking events of the Order's existence were now at an end. The European Langues were shrunken in size and diminished in wealth and importance. The sixteenth century had seen the suppression of the English Langue, and the Reformation had deprived the German of many of its Commanderies. The more modern uses to

which the services of the Order were to be directed, however, were shown in 1783, when a great earthquake devastated Messina. The Order played a prominent part in the organization of relief for the sufferers there.

The storm of the French Revolution then broke over Europe, involving the French Langue in utter though only temporary ruin, and eventually bringing about the downfall of the stronghold that had defied the Turk for so many centuries. The sight of the broken and vanishing glories of the past is always one to stir an emotion of pity and regret: the inexorable passing of Time which renders that no longer necessary which once was priceless, its ruthless casting aside of that for which it has no uses, cannot be looked upon unmoved. But though Malta fell and the Order was apparently at an end of its long, useful and eventful life, there was an element of youthful vigour still left in its veins, that was to fructify after a period of quiescence into the largest voluntary organization of Help which the world has ever seen. Because the Order had held faithfully to its dual vow of Aid to the Wounded and Defence of its Faith, it did not lack an aim and object for its labours when its work of active warfare against the infidel was no longer required of it in the changed circumstances of the world. Therefore, though we see with grief and dismay the gallant ship of the Order apparently engulfed during the

dark days of the eighteenth and early nineteenth centuries, we know that it quietly righted itself, and when the call came those few faithful Knights who held its fortunes in trust were true to the old ideals, and gave themselves to the service of the new labour of mercy in the same ungrudging spirit as the mailed Knights of old. The fierce gentleness, the warrior kindness, the strength, the ability and the charity of the ancient servants of the Order were repeated in their descendants. That is why the day of disaster that dawned for the Order of St. John of Jerusalem is robbed of the element of wanton cruelty that blackens the exit of the Templars from the stage of life.

In September, 1792, the Directory in Paris passed a Decree by which all the estates and properties of the Order in France were confiscated by the State: the Knights were impeached as aristocrats, and fell under the Guillotine. The Headquarters of the French Langue, the Temple in Paris, was turned into a State Prison, and Louis XVI. and his family were imprisoned there. The loss of this powerful Langue was a great blow to the Order: the universal wars that racked Europe led to heavy taxes on its remaining properties: its revenues, already greatly diminished, had shrunk to very small dimensions.

And at last, in June, 1798, the remaining Knights, three hundred and thirty-two in number, old and infirm men, in command of about six thousand

troops, saw the great vessels of the French Navy, under the command of Napoleon himself, appear off the coast of Malta. Echoes of the general revolt against all recognized authority which was convulsing Europe had penetrated even to this stronghold of medieval absolutism, and the mob cut short a defence that was feeble and ineffective against the trained troops of Napoleon, by attacking the Palace of the Grand Master and murdering several of the Knights. The articles of capitulation yielded Malta to France, and Napoleon sailed away to Egypt, taking with him all the treasure of the Order, leaving the remnant of the Knights to find asylum where they could. All the gold and silver and jewels from the Treasury and the rich Churches of the Island, and a vast number of trophies and historic relics of the Order, were carried away by the conqueror, only to be lost when his ships were destroyed by the English in the Battle of the Nile. And it was shortly after this that Malta was taken by Nelson, and with this seizing by Great Britain of the stronghold of the Order, she seemed to drape upon her own shoulders the black mantle with the white Cross that had for so long been the symbol of peace and order in the Mediterranean. As our naval supremacy became assured, we took up the staff and office of guardian of the Peace of the Mediterranean that had fallen from the enfeebled hands of the Knights Hospitallers.

A period of disruption followed, the detailed history of which need find no place here. The next chapter of interest to us opens with the reorganization of the French Langue in 1814, after the fall of Napoleon, and the removal of the ban under which it had languished, and the revival of the English Langue in 1826.

The Rev. Sir Robert Peat, Chaplain Extraordinary to George IV., took a very active part in this revival, and was the first Grand Prior, since when there has been an unbroken sequence of Grand Priors to the present day. This next period must be dealt with in a later chapter, for between the Old Order and the New—the work of its past and the remodelled work of its present—stands the salient point of this whole history, the Convention of Geneva.

So we will leave the shrunken and diminished Order to its years of retirement and slumber, waiting, as we now see, for the trumpet-call of the summons to take up again its own sacred task of Aid to the Wounded.

CHAPTER VI

1443-1700 A.D

The Renaissance—Paracelsus—Brissot—The new weapons—Gunshot wounds—Improvements in surgery—Richard Wiseman.

THE worship of tradition lay like a blight upon Medicine. The standard of attainments and of scholarship among the doctors was at a low ebb, as it was among the people generally. The religious houses were labouring in poverty and ignorance to treat the sick poor. The medieval world was wrapped in a disheartening spirit of apathy. Medicine shared with all learning the paralysing effects of the darkness that came before the dawn of the Renaissance. It shared also in the bright light that shined upon the darkness.

It is curious to note how the fall of Constantinople to the Moslem assault was an event which starts up with dramatic effect from the pages of any subject whose past history we attempt to decipher. That temporary eclipse of the Cross

by the Crescent might be thought to have little connection with our present subject, and yet the scattering of the Greek culture that had been cloistered in that great city of the East, which led to an unparalleled revival of all Learning, awoke Medicine from her slumber of centuries.

The first thing that happened was one of those apparent trifles whose tremendous influence can only be appreciated ages after. This was the discovery, in 1443, of the MS. of the "De Medicina," written by the Roman Patrician Celsus in the first century. This MS. was found in a church at Milan, and was one of the first medical books ever printed. Being written in Latin, it presented to the modern doctor the best of the Hippocratic doctrine and practice without the distorting medium of a bad translation: and without demanding of his intelligence a knowledge of a dead language, for Greek as a study was neglected by the majority of the physicians of the fifteenth century. Ten years after this Constantinople fell.

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The names of two men stand out as having rendered conspicuous services to Medicine at this critical period of its history: less for their actual contributions to scientific knowledge, than for the way in which they headed the revolt which eventually freed it from the trammels of tradition.

Paracelsus (1490-1541) was a German with no taste for dead languages or the classics, an instinctive dislike of pretentious authority, and enormous self-confidence. It seems probable that the "De Medicina" of Celsus laid the foundation of his medical education, for he is said to have revered only two authorities, Hippocrates (who was faithfully reproduced by Celsus) and those mythical healers Apollo and Machaon (which was absurd).

But much of Paracelsus's teaching and writing does seem absurd. While sweeping away established dogma, he substituted a complex dogma of his own, a mass of irreconcilable theories and speculations, mixed with some practical wisdom. He learned his art travelling all over Europe, picking up the methods of healing practised by the barber-surgeons, the monks, the old women, and the alchemists and conjurors. His first public lectures were delivered at Basel in 1527, when he was thirty-seven, and he inaugurated these by solemnly burning the books of Galen and Avicenna, since both Greek and Arabian Schools were included in his detestation.

He claimed that his edifice of Learning was built upon four pillars, Philosophy, Astronomy, Alchemy, and the Virtue of the Physician. For the Christian, he said, there is only one cause of sickness, the "Ens Dei," or direct action of God, which should be regarded as a purgatorial punishment.

His best known book was *Die Grosse Wund-Arznei* (published 1536), and in this his observations on wounds and their treatment, and several of the epidemic diseases, practical knowledge of which he obtained on the battle-fields of Europe, were marked by truth and good sense, though often rendered obscure by the mystical, pseudo-philosophical form in which he presented them.

Paracelsus laid great stress on the employment of various chemical and mineral drugs, especially antimony, the use of which became a sort of badge of his followers. A bitter controversy was waged in France on the subject of antimony; several notable men of science were driven from the conservative Faculty of Medicine in Paris, ostensibly for their advocacy of this drug, but actually because its use was tantamount to a declaration for the Greek versus the Arabic Schools: and Paris was Arabic to the core. It is curious that this very reactionary University should have been the breeding-ground of the two leaders of revolt against the slavish following of established custom, but so it was. For the second name to deserve a place of honour in this fight for freedom of observation is that of Brissot (1470-1522), a conspicuous figure in the Medical Faculty of Paris University. He started a controversy on the subject of blood-letting, a very popular medieval measure, which eventually resulted in the fall of

Arabian surgery from its predominant position in the scientific world of that day. One of the practical differences between the Schools of Greek and Arabic surgery, one of their test cases, like the use of antimony in medicine, was in bleeding for pleuro-pneumonia. The Arabs practised venesection at a distance from the part affected, but Brissot opposed this as being contrary to reason and experience. When he fell back on the support of the Hippocratic teaching for his advocacy of blood-letting on the side attacked with the disease, he brought the hornets of Paris University about his ears. He was ignominiously expelled, but the flame of criticism, lighted by the spread of Greek culture and fanned by the strong wings of the Renaissance spirit, having once attacked the edifice of Medical Knowledge, was not to be quenched by a University decree. Brissot carried the torch from Paris, and set the controversy burning and hissing all over Europe. Even the Pope took a hand in it. And shortly after Brissot's death, the Emperor Charles V. joined in, on the invitation of the Arabists, who confidently looked to him to pronounce in their favour. But it was an unlucky moment for their appeal, as he had just lost a relation under Arabic treatment, so to their dismay he declared for the Greeks and Brissot.

The new spirit of independence and criticism that was already permeating the Italian Schools

was imbibed by Linacre, the Oxford Scholar, when he went to complete his study of Physic at Padua and Florence. From the Platonic Academy established at Florence by the Medici he is said to have taken the model of the famous "Royal College of Physicians," which he founded in London in 1518. And he not only gave the college its existence, but he endowed it with the true Renaissance spirit, which refused to take anything on trust because it was sanctioned by authority and of a hoary antiquity, its essential youthfulness demanding inquiry, investigation, proof, and resulting in discovery and a new era of common sense in medicine.

The last vestige of the "Temple Medicine" of primitive days, with its charms and spells and formulæ, was thus chased from the medicine of the scientist, which had been founded by the wound-healer on the battle-field in days as ancient, and had fought for its freedom with varying success through all the ages.

This freeing of surgery from the swaddling-bands of ancient rules and practice, this recrudescence of original observation, this critical, investigating, progressive spirit at work upon the wounded man could not fail of its effect. And the new spirit was spurred on by a new kind of injury that appeared upon the battle-field, which presented new problems to the healer. As blood-letting was the controversial subject among medical

practitioners, so gunshot wounds made the bone of contention among military surgeons.

Hitherto arrow wounds, sword cuts, and the fractures and dislocations incident to hand-to-hand fighting had formed the material of the army surgeon's practice. The contused and lacerated wounds made by the stone and metal bullets of the new weapons presented new features.

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The first practical gun was called a "bombard," and was invented for use as a siege gun, to batter walls and fortifications to pieces. These cannon were like mortars in shape, wide mouthed, and with a high trajectory: they relied more on the weight of the projectile than upon the force with which it was thrown to do the requisite amount of damage. They are said to have been used in the English army as early as 1346, under Edward III., but the first siege in which we know them to have been effectively employed was that of Constantinople in 1453, when it was taken by Mohammed II.

The fall of Constantinople is thus notable, not only for the impulse it gave to the Renaissance, but for the methods employed in the reduction of the city. The old and the new were at work here side by side. The Ottoman ruler had resolved on its capture at all costs. It was not only the last stronghold of the Greek Empire, but their capital

and the principal city of Western Civilization. His preparations were on a vast scale. Cannon of enormous size were cast at Adrianople, throwing stone shot of six hundred pounds in weight; a charge of gunpowder was the propelling force. Wooden turrets covered with raw hides were prepared to shelter the advance of attacking parties. Armour was still worn, and the rank and file of the army were armed with bows and arrows, and swords. Thus cannon thundered and smoke drifted and obscured the battle-field as in modern days, while arrows flew thick through the air, and the defenders rained boiling oil and Greek fire from the battlements.

The success of the big guns in knocking down buildings led to the adoption of small portable firearms to knock down men. In 1446 the first guns were tried in the English army, and the Yeomen of the Guard (enrolled in 1485) were armed, half of them with bows and arrows, and half with arquebuses, which discharged small round stones and bullets through a tube: a mechanical arrangement, not gunpowder, was used to project these, and of course they did not carry far, nor could they be aimed with any precision.

A Spanish invention, the musket, was so heavy that it had to be supported on a staff stuck in the ground, with a fork on which the barrel rested when it was being fired. The flintlock, or firelock, was the next improvement on the matchlock,

and was introduced in the English army in the time of Queen Elizabeth. Charles II.'s forces were re-armed with the fusil, as long but much lighter than the musket, and a regiment of Fusiliers was first raised in his reign. The smooth bore of these guns gave them a very low velocity, dependent on the amount of gunpowder exploded behind the ball, and the flight was very irregular. It was only in the beginning of the nineteenth century that rifled muskets were used in the English army, which carried as much as three hundred yards, but allowed no certainty of aim beyond one hundred and fifty yards. The bullets used in the common musket were large, only ten went to the pound weight: of those for the arquebus, seventeen went to the pound, and for the newer flintlock carbine, twenty-four went to the pound. The pistols with long barrels used shot that weighed about twenty to the pound.

Coincident with the change in weapons came changes in the constitution of European armies. The fifteenth century witnessed the downfall of Feudalism as a military system. The first regular established army, or armed band kept during peace in readiness for war, had been the Turkish Janisseries of the fourteenth century. Charles VII. of France, in 1445 organized a force of fifteen "Compagnies d'Ordonnance" which was not disbanded in peace, as of old. But armies only began

to receive anything like a permanent organization in the sixteenth century.

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There was a very general belief in the early days of these firearms that the wound caused by them was poisoned. This idea not unnaturally arose from the appearance of the wound: the broken skin surrounding the point of entry of a bullet was usually blackened and discoloured; there was much septic discharge from the wound, with widespread surrounding inflammation. The medieval treatment for poisoned wounds was boiling oil, a species of cautery roughly efficacious: therefore boiling oil was invariably applied as quickly as possible to the unfortunate limb injured by a bullet.

The first English treatise *Of Wounds made with Gonneshot* was published by Thomas Gale in 1563. He served with the army under Henry VIII. against France in 1544, and again with the English forces which assisted Philip II. of Spain against the French in 1557. At that time the majority of the British Infantry were still armed with bows and arrows, halberds and pikes, but a small and select number carried arquebuses and hand guns.

But the true hero of the "Gonneshot Wound" was a Frenchman, Amboise Paré (1517-1590). Paré was a barber-surgeon, and worked for his

living at his craft, studying meanwhile at the Hôtel Dieu, and gradually becoming more surgeon than barber. His first experience of wounds on the battle-field was in the campaign of Francis I. in Piedmont, when he followed the forces to Turin in 1536. The barber-surgeon had then no recognized position with the army, but had to make his own reputation and force himself into notice by skill and good luck, when he might be accepted as a member of the staff of some great noble, and he was paid in money or in kind for his services to the rich or their dependents. The kind of chances they found on the field is well illustrated by Paré's own story, told in his "Journeys in Diverse Places."

A servant of the Captain-Ensign of M. de Rohan's Company, in attacking with others some peasants barricaded in a Church, received "seven sword wounds on the head, the least of which penetrated to the inner table of the skull, and he had four other wounds upon the arms, and one on the right shoulder, which cut more than half of the blade bone." His condition was thought quite desperate and his master had ordered his despatch, as the most merciful end to his sufferings, when Paré intervened and declared his confidence that he could restore him if he might have all the conveniences he required. This was granted, and he arranged a country cart, drawn by a horse, with a bed in it. In this he installed his patient

and attended personally to him. He says : " I did him the office of physician, apothecary, surgeon and cook. I dressed him to the end of his case, and God healed him, insomuch that all the three Companies marvelled at his cure. The men-at-arms of the Company of M. de Rohan gave me each a crown, and the Archers half a crown."

It is noteworthy that Paré constantly advocated the formation of Field Hospitals, and predicted that they would prove of the utmost utility, but was unable to overcome the prejudice of the military authorities, who considered that they would be in the way. The first military hospital worthy the name was instituted by Sully in 1597, during the siege of Amiens. The formation of a regular military medical service attached as a matter of course to all armies in the field really only dates from the end of this, the sixteenth, century.

Paré was the first to attack the popular belief that shot wounds were poisoned. In a pamphlet dated 1545 he declared their cautery by boiling oil to be not only unnecessary but absolutely harmful, and he trusted to a clean dressing and simple bandage. The blackened appearance of the wound he demonstrated to be due to the powder and dirt carried on the clumsy bullet and deposited on the torn edges of the skin, the septic discharges to injury of the deeper tissues and bones, and the surrounding inflammation to the bruising of the bullet. He gave a very frank

and honest account of the chance manner in which his first doubts of the necessity for the scalding oil treatment were aroused, and of his further experiments in leaving the wounds to nature. It was on his expedition with the Army to Turin in 1536, when he was only twenty years of age, that there were such a great number of wounded that the cauldron of boiling oil prepared by the surgeons to cauterize all the gunshot wounds was entirely exhausted. Paré therefore had to content himself with the use of a simple dressing. He spent a night of great distress and anxiety as to the result, but when he went the round of his patients in the morning great was his astonishment and relief to find that those wounds which had escaped scalding were doing considerably better than the others. Hence he discarded the cautery except in cases of amputation or the loss of an entire limb.

But like many another popular superstition, and with as little foundation, the "Poison" theory stood its ground for quite another two centuries, and its echo is even heard in Paris in 1848, during the insurrection, when M. Roux, reporting on the cases under his care at the Hôtel Dieu, records his conviction that the gunshot wounds were *not* poisoned, but that their septic state was due to careless and ignorant treatment and the insanitary and crowded places in which the wounded were housed.

Another very early fallacy with regard to these wounds was that they were *burned* by the bullet, the velocity of its flight through the air being supposed to make it hot enough to scorch the flesh it touched. This is refuted by Gale in his treatise of 1563.

The large amount of contusion and bruising from the solid spherical bullets of those days is now seldom met with, except sometimes in injuries caused by flying fragments after a shell has exploded: with increased velocity and smaller size has come greater penetrating power and a smaller surface of injury. Very serious results used to follow those contused wounds, with sloughing of a large expanse of skin and deep ulcers; the deeper tissues and the injured structures within the limb or the trunk were thus exposed to septic infection—antisepsis was unknown—and in the crowded and insanitary military hospitals mortification quickly resulted.

Paré's most notable contribution to operative surgery was his use of ligatures along the course of large arteries, a method of controlling hæmorrhage which made amputation on a large scale practicable for the first time, and almost all the surgery of the battle-field was amputation from the sixteenth century onwards.

Paré was adored by the army; was subject to much opposition from the medical faculty, as was only to be expected from his original and

independent outlook, and yet was highly esteemed by the French Court, being made Surgeon in Ordinary to the King.

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The subject of the transport of the wounded from the field received some attention at this time, at least from a writer named Digges, who thus modestly puts forward his views: "It were convenient to appoint certaine carriages and men, of purpose to give their attention in every skirmishe, and incounter, to carry away the hurt men to such a place as Surgions may immediately repayre unto them, which shall not only greatly incourage the souldior, but also cause the Skirmishe to be better maintained, when the souldiors shall not neede to leave the fielde to carry away their hurt men."

But no one in authority seems to have seen the glimmer of reason and humanity in his remarks, for no such arrangement was attempted.

About this time the first form of Tourniquet was introduced, it is said by Wilhelm Fabry, of Hilden, near Düsseldorf (1560-1634), who placed a piece of wood beneath the bandage to exert pressure on the artery. His life was spent amid the storm and clamour of the battle-fields of the "Thirty Years' War." From this grew the Block Tourniquet of Morel, which was first used at the Siege of Besançon in 1674, to be superseded by Petit's Screw Tourniquet in 1718.

Fabry was made City Surgeon of Berne, where he had a small private hospital in which he gave clinical instruction to students and doctors. His chief work was *Six Hundred Surgical Cures and Observations*, and he is best known for his method of amputating with a red-hot knife, a practice that had been used by the Arabs centuries earlier, but was greatly improved by his alterations in the knife itself and in the procedure. Flap amputations which had been practised in the best period of Roman surgery were not reintroduced till late in the seventeenth century by Wiseman. Paré's Ligatures and Fabry's Tourniquet, directed to deal with the course of the arteries during amputation, instead of trusting to tying their ends and cautery, were among the first uncertain steps taken in the direction of Harvey's discovery of the Circulation of the Blood. Harvey (1578-1657) eliminated that element of chance which had hitherto prevailed in the control of hæmorrhage during operation and amputation, and made it a matter of scientific knowledge. His gift to the wounded soldier was of incalculable value. The Ancient Greeks and Arabs alike had looked on amputation with horror; they feared to enter mutilated upon the future state after death. Hippocrates does not give any case of amputation except where mortification had set in and the death of the limb had actually taken place. Even then, he advocates cutting through

the flesh that is already dead, rather than cutting through the living tissues above the seat of infection, as later operators did. Celsus calls amputation "the last sad remedy," and up till the seventeenth century it was never resorted to until the limb was past all hope, and it was a desperate expedient to save the life of the patient, which it then very probably failed to do. The first to advocate primary amputation, before the onset of fever, was the great English Army Surgeon, Wiseman.

Richard Wiseman (1620-1676) has been called the Father of English Surgery: we may add that he can lay good claim to the title of Father of Military Surgery. His whole experience was gained in war, either naval or military, and his life service was dedicated to those who fell wounded in action. At that day, all ranks in the navy and army were in a sense amphibious: where the fighting took place, there the fighters congregated, whether on ships or on land. Admirals, captains, lieutenants, and the rank and file of the fighting forces were found alternately on land or at sea, and the doctors likewise.

For Wiseman, like others of his craft, the treatment of the wounded was his sole preoccupation. His first active service was as a surgeon on one of the ships of the Dutch navy; then he served in the Spanish navy, and afterwards joined the Royalist forces in England in 1645, serving in Dorsetshire, Devon and Somerset. He was made

Sergeant Surgeon to the King, Charles II., in 1671. To the delicacy of his later years, when he suffered from lung trouble no doubt attributable to the exertions and exposure of his whole life, we owe the great number of "Chirurgical Treatises" penned by him. In the crowded days of the Royalist and Parliamentary Wars, the Army Doctor on the field had little time to write down the facts and deductions that his active brain were registering. In the enforced inactivity of invalidism he had leisure to write for our benefit, not only those six hundred surgical cases described by him with great minutiae, but to illuminate by his intimate personal reminiscences the whole subject of the treatment of the wounded in the Royalist Wars in England. As Principal Surgeon to the forces he received eighty pounds per annum, and his emolument as Sergeant Surgeon to the King was twenty-six pounds, thirteen shillings and fourpence; these salaries, with a perpetual annuity of one hundred and fifty pounds a year which he enjoyed, gave him two hundred and fifty-six pounds, thirteen shillings and fourpence per annum, which is equal to about one thousand and twenty-six pounds at the present purchasing power of the English sovereign. It does not even then sound an excessive reward for a life of the most strenuous and self-denying exertion and a skill and intelligence that had carried him to the very top of the surgical tree.

He was in favour of early amputation before the onset of fever and gangrene, if convinced that the limb could not possibly be saved; but was opposed to a reckless use of the knife, and many times saved limbs condemned as beyond hope by other surgeons and the general opinion of the day. He followed Paré in his conviction that gunshot wounds were not poisoned; in one treatise he warned naval surgeons of the effect of wounds from chain-shot and splinters. "All these are contused wounds and look black, and do too often deceive the unexperienced Chirurgeon, he taking them by their aspect to be gangrened."

Among the many stories he tells of cases treated by him, he gives some illuminating details of his treatment of a gunshot wound with severe hæmorrhage. "A great Hæmorrhage happening to a souldior at the surprise of Weymouth (Parliamentarian) by the garrison of Portland (Royalist) by a shot through the heel, I endeavoured the stopping the blood by astringents, bandage, etc. But after all, I was put to the use of the actual cautery, which I did apply successfully."

After these fights he shows us the wounded lying crowded together in the churches and barns and stables of the vicinity, perhaps with straw to lie on and perhaps without, in the same fatally insanitary manner that we have become familiar with in stories of the Napoleonic Wars. For yet two hundred years the idea of the Field and

Temporary Hospital was to slumber in the hearts of men ; the " Queen's Hospital " might never have existed.

The contagious diseases that ravage large bodies of troops were also dealt with by Wiseman. When he joined the Royalist army in 1645, he found the soldiers troubled with an epidemic of scabies. " I commonly let them blood which fell under my care, and advised them to drink for their morning draught brimston and milk, and to annoint themselves with brimston and butter. But in warm weather frequent bathing in the rivers was the cure."

He tells at some length the story of a great fight at sea, and of one of the cases he treated while it raged. " Amongst the many wounded men that were put down into the Hold to me, one of them had had his right arm extremely shattered about two fingers' breadth on the outside above the Elbow by a great Splinter. I ought to have cut off this Man's Arm presently ; but a sudden cry that our ship was on fire put me in such disorder that I rather thought of saving myself than dressing my patients. I hastily clapt a Dressing upon the wound, and rowled it up leaving his Arm in his other hand to support it, and endeavoured to get out of the Hold as the others did, verily believing I should never dress him or any of them more." But the fire was fortunately put out, " and I returned to my work." His description of this

case shows how little preparation was made on board a ship for the reception or care of those wounded. He adds : " The fight being over, and we gotten into the next Port, I caused this Mariner's bed to be set up (which was four pieces of wood nailed together and corded) and a Bear's skin laid upon it and fastened between two guns, to the carriages." It does not sound an ideal bed or position for a badly wounded patient, but his arm eventually healed satisfactorily in two months.

Among the amputations he described was one at the Siege of Weymouth. " I was called at break of day to an Irishman of Lieutenant-Colonel Ballard's Regiment, who shooting off his Musket, it brake, and tore his hand to pieces after a strange manner. I, designing to cut off his Hand, sent presently to my Quarters to one of my Servants to bring both Saw and Knife, also Dressings, of which at those times we had always ready. They being brought I took a red ribbon from off my Case of Lancets and bound it about his Arm some four fingers' breadth above the *Carpus*, and having Cut the flesh round off, I bared the Bones and separated the Flesh between them. Then I sawed off the Bones, and untied my Ligature and bringing down the musculous Flesh and Skin over the end of them, without any crosse stitch, I drest up that Stump with Restrictives and good Bandage, and returned again to my Quarters."

Later on a messenger summoned Wiseman to this man as he was suffering unbearable pain. "I wondred at it and hastned away." He told the Doctor that "he could not endure that red Ribbon that I tied his Arm with. I was at first surprised to think that I should leave the ligature upon his Arm, that being a sure way to bring a Mortification upon the Part. I therefore put my Hand in my Pocket and feeling the Ribbon on my Case of Lancets, showed it him. He seemed at first to doubt it, but after he saw it was so, he laught, and was for that time at ease." This case resulted in a complete cure in a few weeks.

Wiseman was Master of the Barber-Surgeons Company in the year of the Great Plague. Associated with him as "Sergeant Surgeon" in 1671 and onwards was John Knight, his duties lying chiefly with the administration of medical work in the Navy, and he corresponded to the modern "Director-General of the Medical Department of the Royal Navy." It was his responsibility to make arrangements for the reception and treatment of the wounded arriving by sea at English ports from the Dutch Wars. He had to see and pass all the medical and surgical stores both of the Army and Navy, and every Naval Surgeon had to be examined and approved by him before receiving his appointment. He accompanied Mr. Evelyn, one of the Commissioners for the sick and wounded in the Dutch Wars, on a visit to the

Kentish ports, which was really an informal Commission of Inquiry into the whole subject.

Thus we see the authorities tardily awaking to the fact that the care of the wounded was of deep concern to the Nation. This new recognition of the importance of the Army Surgeon is seen in the founding of a Chirurgical College in Berlin, by Surgeon-General Holtzendorff in 1714, for military surgery only. This College is still in existence with added faculties. And in Vienna, in 1785, the "Joseph's Akademie" for Army Surgeons was instituted.

The sixteenth century saw the introduction of a new custom which materially improved the teaching of both medicine and surgery: the giving of clinical instruction in Hospitals to medical students by the Doctors in Charge. Von Hilden, in Berne, and some of the towns of Italy were the pioneers of this movement, which from small beginnings has spread to its present vast dimensions.

The first published study of the epidemics incident to military camps was written by John Pringle (1707-1782). His "Observations on the Diseases of an Army" was translated into most of the European languages and became the standard work upon the subject. The general health of troops in camp and the sanitary precautions necessary for their protection from sickness had till then received little of the attention that was its due.

CHAPTER VII

1700-1815 A.D

Europe during the Napoleonic Wars—The Army Medical Services—France—The inventions of Larrey and Percy—Germany—Goercke and the education of Army Surgeons—After Waterloo—Austria—Brambilla and the Field Hospitals.

A NEW phase in the story of Ambulance work was now to be entered upon. At last the Authorities began to consider our "Three Problems" as united and indivisible. They had educated surgeons at their disposal, large civil hospitals as models for military hospitals, and experienced minds were engaged on ingenious schemes for the transport of the wounded. Added to all this, there was seldom any lack of wounded men to practise upon, for wars were frequent and fierce all through the eighteenth century. A period of peace followed in the nineteenth, in which the lessons of war could and should have been digested, to have astonished the world with a sensational efficiency when war broke out once more in 1854, to flare or smoulder in some part

or other of the world for the next thirty years. But things do not happen as they could and should, either to men or nations, and the cheerful promises of the eighteenth century were dishonoured in the nineteenth. For this is not a work to which any limit can be set, no goal can be sighted and reached and the competitor rest satisfied. So long as science could have done more for a wound than lack of appliances or transport have permitted it to do, so long as a wounded man suffers longer and more dangerous injury than his hurt has required, so long as war costs not only a tragic tale of lives sacrificed to wounds but to preventable disease—so long is there work for the humanitarian.

Dr. Evans, hero of the American Medical Service, declared that "a veracious history of all wars would be a list of disease, death, and suffering which might easily have been avoided." And Dr. Scriver, speaking of the enormous French losses of 1855-6, wrote: "I am painfully impressed and may well be astonished that in the nineteenth century sure means have not been adopted to prevent the increase of such losses, or at least to reduce them to ordinary proportions. We may be quite persuaded of this truth, that the loss produced by the most deadly battles does not equal one-fourth of the total loss which an army generally sustains." These strictures were passed more than one hundred years after the Nations

and their Military Authorities had recognized the need and begun to devise the means to deal with it!

We may well wonder that in face of the grave issues involved, the progress should have been so lamentably slow. For the wars of no period can show such an appalling holocaust of human lives—such waste and sacrifice—such unassuaged agonies—as this we are approaching. It is the very dark hour before the dawn.

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The eighteenth century, then, sees all the Nations of Europe busy organizing their State Army Medical Services. It would be tedious and unnecessary to give minute details of each of these and the vicissitudes it went through. I propose merely to sketch the general lines on which they progressed.

France, for instance, dealt with her problems with a spasmodic brilliancy. At times a feverish energy and enthusiasm were imported into her dealings with the subject, at others apathy ruled and economy strangled the unfortunate military medical service almost to the point of collapse.

In 1708 a Decree was issued appointing two hundred and seventy-one army medical officers, to be distributed among the military hospitals established in fifty-one frontier towns. The equipment and supplying of these hospitals was farmed

out to civil contractors, and their charges were based upon a (by no means trustworthy) list of the patients nominally in the wards. The doctors purchased their appointments, the contractors swindled the authorities with their connivance, and the abuses were appalling. The poor sick soldier received some doctoring, but little of comfort or attention.

In 1716 the practice of selling the medical appointments was abolished, and Military Commissaries were given the supervision of the contractors. The regulations issued soon after were excellent in theory, notably on the disinfection of wards, cleanliness, and segregation of infectious disease in special hospitals. Little actual improvement was seen, however, since there was no authority to insist on the carrying out of these rules.

At this time the field organization of the medical service was completed. To each battalion a Regimental Surgeon, with an Assistant Surgeon and two students (dressers), was allotted, with special transport for medical equipment and stores for the Ambulances. Four-wheeled wagons to take three patients lying down, one to every hundred soldiers, were to follow the ambulance or field hospitals. Schemes were prepared for establishing village dressing stations and temporary hospitals, from which the wounded were to be forwarded to the base or stationary Field Hospitals.

In 1743, after the battle of Dettingen, arrangements of this kind were put into practice for disposing of the wounded, with very satisfactory results. Cases were conveyed along the Rhine or the Maine on barges fitted as Hospital Ships, and several large temporary Military Hospitals were established and very well equipped according to the ideas of the day.

But a spirit of parsimony played havoc with the service, and the jealousy between the surgical and medical staffs, the former being in the subordinate position, brought many good schemes to naught.

In 1747 the farming out of the Military Hospitals had become a public scandal, and the system was abolished, the Military Commissaries being given absolute jurisdiction over the commissariat as well as over the medical staff. This was not a success from the scientific point of view, and among other things, such as poor pay and status, tended to keep the military medical profession in an unsatisfactory state for many years.

Then came the upheaval of the French Revolution and the disintegration of existing institutions. From 1789 to 1814 and the end of the First Empire, the Army Medical Service went through an agitating period of experiments and decrees. The two great surgeons, Larrey and Percy, devoted themselves to military surgery and devised the most elaborate plans for dealing with the large numbers of wounded which Napoleon's campaigns gave them

to experiment with. These, however, often benefited but little from such plans, since parsimony and the interference of secular authority, if they did not bring them to nothing, whittled them down till they were worse than useless. To the wounded man lying where he fell, with every hour of waiting reducing his poor chance of life and a future of health, the elaborate scheme for his removal and treatment which has hopelessly broken down is a far worse friend than the rough and ready method which is working well according to its own standard of excellence. It is plain that if the transport works so far well that it crowds thousands of wounded into one building or village, and then the surgeons, and the dressings, and the food they require fail to arrive for two or three days, the state of those men is unspeakably worse than if nothing more than their billeting in small numbers in scattered cottages had been attempted.

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Baron Larrey is the picturesque figure of Napoleon's campaigns. Born in 1766, he went through all the wars of the Republic and Empire, was twice taken prisoner, was wounded at Waterloo, and died at a good old age in 1842. He was the recipient of the highest eulogy that Napoleon ever bestowed upon a man—" *C'est l'homme le plus vertueux que j'ai connu*"—and he left him a legacy of one hundred thousand francs.

His chief contribution to field ambulance work was the organization of "flying ambulances," of which he arranged three for the Italian campaign of 1797. Each of these was put in the charge of a Staff Surgeon, who had two Assistant Surgeons and twelve ordinary surgeons under him, with two administrative officers, three army non-commissioned officers, one carrier of dressing material, and twelve sick attendants, all mounted, besides six non-commissioned officers, a mechanic, and twenty-five sick attendants on foot. The transport of their hospital stores was by four heavy wagons on springs. Twelve light wagons for the transport of the wounded were provided, four of these drawn by four horses to take four patients lying down, and the others drawn by two horses for two patients lying down. These Ambulances were for the Imperial Guard only. No such complete organization was available for the army generally, for whom civilian surgeons volunteered to assist the Battalion Surgeons, and took with them what stores and dressings they could manage to transport.

The transport of medical stores was the great difficulty then, as it still is. When all available transport was needed for the fighting force and its feeding, the interests of the sick and wounded were apt to be neglected, especially as they had no regular service of their own. If private doctors or philanthropists provided such it was only

too liable to be commandeered for some other purpose.

In Larrey's Memoirs it is stated that for Napoleon's great expedition to Syria he had himself prepared a caravan of fifty camels, each with two panniers in which to carry wounded men from the battle-field, since in so hot a country the dangers of lying for hours untended were aggravated ten-fold. But his merciful scheme was brought to naught by the Transport Agents taking possession of all his camels for the use of the fighting force, and the wounded were deprived of their services. Larrey adds a philosophic note that he could not protest for he recognized that a Commander's first duty was to fight and win, and that the ranks of the effective fighters must be considered before those who had had the misfortune to fall out.

Again in Algeria in 1844, Hutin made just complaint to the Minister of War that all the Ambulance mules, loaded with hospital cases full of medical dressings and material, were taken by the Corps Commanders for transport and the cases put to other uses, and thus the sick were robbed.

This difficulty of securing and keeping pack animals was evaded by Larrey in 1813, when after the battle of Bautzen, in Saxony, he transported two-thirds of his wounded thirty miles in handcarts wheeled by men.

He further makes a note of the fact that on the taking of Spire in 1792, in spite of the military

regulations, there was no proper Ambulance Service. The wounded left on the field were collected in one place by unskilled carriers, soldiers and the peasants of the neighbourhood, till country carts or commissariat wagons fetched them. "Thus they were never less than twenty-four hours and sometimes thirty-six or more, so that the greater part of the wounded died for lack of help."

In Smolensk in 1812, he was entirely destitute of dressings, which he had to supplement with the ingenuity of a trained First-Aider. His store of linen being quickly exhausted, he had recourse to the paper of the Archives found in a Government building converted into a hospital; he made splints and slings of parchment, paper coverings for sick beds, and used tow for lint.

His colleague, Baron Percy, Chief Surgeon of the "Grande Armée," wrote a report of the Siege of Dantzic to Marshall Duroc. With sixteen hundred wounded and two thousand sick, he declared, there was "not a single straw mattress, no basins, no nurses, nothing." On one occasion he saw eighty carriages full of sick and wounded arrive at a small so-called temporary hospital where there was nothing ready for their reception. No attendants, no nurses, no mattresses, not even straw; no linen, lights, or food, and no means of obtaining warmth. To this inhospitable refuge had come these despairing, dying men,

those of them too ill to move having lain in the carts for five days, and the state they were in can be better imagined than described. Percy himself waited to do what he could for them, when even to change the dressings on the wounds was in few cases possible; and he records that though he waited till nine p.m. no help came, only an official who came to "count the victims of this most culpable improvidence, this most barbarous carelessness."

After the battle of Eylau, the wounded had been taken, or had taken themselves, to Thorn, five leagues away, and were in a deplorable state. Six days after the battle, Gama, the chief of the medical staff there, complained that five thousand of them were crushed into a few houses, where they lay on straw that had become unspeakably filthy, where there were no proper cooking-places for so large a number, few pots in which to cook, and scarcely any jugs in which to carry broth and drinks for the feverish. The dressings supplied him were entirely inadequate, and he lacked the nurses to help him deal with this groaning, tortured mass of humanity, in which Death now seemed the shattered soldier's only friend, when prompt attention could probably have effectually restored him.

In the Peninsular War, General Foy himself declared that the wounded often had to be abandoned for lack of transport, and that conquerors and conquered alike lost four times as

many men from preventable causes and the utter "disorder of the system, than from the swords and guns of the enemy."

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The British army in the Peninsula was likewise without any kind of trained Ambulance corps or of proper sick transport carriages. The collection of the wounded was ill-arranged and ill-executed. Soldiers from the ranks were pressed into this service, bandsmen, convalescents, and others, and commissariat wagons and country carts were used. Stretchers were usually improvised out of hurdles, doors, or blankets. Sir James McGrigor, after an experience of war conditions in many lands, became chief of the Medical Staff of Wellington's Army. He directed all the medical arrangements of the campaign, including the Siege of Badajoz, the ghastly days of the retreat from Burgos, and the huge battles of Vittoria and Toulouse. It was through his urgent representations that the Army Doctors before Badajoz were mentioned in despatches for their services and gallantry, the first time such a well-deserved honour had ever been accorded the profession. Sir James McGrigor inspired Wellington with great confidence. He not only arranged good hospitals and collected an efficient staff to work in them, but he paid unusual attention to the preservation of the general health of the troops. His success in his efforts was

variable, but his failures were as a rule the result of lack of transport. During those strenuous months which began with the Siege of Burgos and included the battle of Vittoria, the total number of sick and wounded registered as passing through the Hospitals was ninety-five thousand three hundred and forty-eight. It was owed to the skill and energy of McGrigor and his medical staff that "the army took the field preparatory to the battle with a sick list of five thousand. For twenty successive days it marched towards the enemy, and in less than one month after it had defeated him mustered within thirty men as strong as before; and this, too, without reinforcements from England, the ranks having been recruited by convalescents" (Napier).

But McGrigor was not always so successful. After the storming of San Sebastian the city was given over to burning, pillage, and lust; and among all the frightful scenes none is described as more ghastly than the Hospital, which should have been a haven of help. But to the great building, a hospital in name only, wounded friend and enemy were indiscriminately carried, and dumped down by the overworked, untrained bearers, bandsmen, countrymen and such; there they lay to be alike neglected. "On the third day after the assault many of them had received neither surgical assistance nor food of any kind" (Hooper).

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During the campaign on the Rhine of 1801, Percy organized a corps of Surgeons for each division of the Army. These Surgeons followed the army sitting astride on a long sausage-shaped wagon, its interior filled with dressings, splints and instruments sufficient to cope with twelve hundred wounds, while stretchers were hung on underneath. One hundred and twenty hospital orderlies were attached to each of these mobile corps of surgeons. But this ingenious design was not a success, the wagon proving too heavy and clumsy for the bad roads and difficult country traversed by an army in the field. Following the example of Percy and Larrey, who had organized bands of trained hospital orderlies, the Army Intendance Department also created six battalions of these. And to Baron Percy the credit is due of inventing the first trained bands of *brancardiers*, or stretcher-bearers. These were accepted by a Decree of 1813 as a recognized unit of the Imperial Army. They were selected volunteers from the different regiments, and were so equipped that any two of them, meeting, could form a stout litter in a few minutes, with two poles seven and a half feet long, two traverses, and a piece of cloth hemmed on either side. The poles were passed through the hems, and were kept apart by the cross-bars when lashed in position. This was the embryo of the Regimental Bearer Company of the present day.

Baron Percy was so advanced in his ideas that he constantly urged the neutralization of the Medical personnel and stores, and the Ambulances and Hospitals, thus anticipating the Geneva Convention by sixty years or more.

The great source of weakness in the French system was the subservience of the medical to the administrative departments of the army. The efforts to improve the medical service were often so ill-directed or so ill carried out that things went from bad to worse. By a Decree dated 1852, whose framers may very possibly have been actuated by the best of intentions, the conditions were made so fearfully bad that good doctors would not enter the service at any price. The total number of medical officers available during the Crimean War was only one thousand and eighty-nine, which by the date of the Italian campaign of 1859 had been further reduced to one thousand and twenty-one. There was really little improvement until Compulsory Military Service was put on a firm basis, when along with the whole personnel of the Army, the Medical Service underwent a complete reorganization. Its peace establishment was increased to one thousand two hundred and forty-five medical officers, with a Reserve of one thousand for war, and the whole Ambulance Service was arranged on modern lines.

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As unlike the French as the Teuton is unlike the Latin character, the story of the German Army Medical Service is one of quiet steady progress under able and honest directors. Great names among the Ambulance workers of the world stand out from the pages of German history.

Like the wounded of other nations, the German soldier's needs were originally ministered to by the barber-surgeons, under the name of *Feldscherer* (field-barbers), a name that is still extant in the Russian Medical Service ; and to these *Feldscherer* in time of peace fell the duty of shaving the chins of their regiments.

Above the *Feldscherer* were a few better educated and equipped doctors, *Wundärzte*, who were placed in the higher medical posts with the Army in the field. But there was scarcely an attempt at the organization of an Army Medical Service till the reign of Charles V. in the sixteenth century, when regulations were issued appointing a *Feldscherer* for each company, with drugs and instruments, while a *Wundarzt* was to be on each Commander's staff. A Principal Medical Officer was appointed to the Headquarters of every Army to supervise the stores and equipment, and the organization of hospitals or the billeting out of the wounded. The sick and wounded were treated in camp, their tents being placed near the baggage lines, and they were tended by women. When the Army moved on, the worst cases were handed

over to local people to care for, while slighter cases were carried in the provision wagons. This desertion of the sick was a cause of bitter complaint. Those who could not march and fight were often in a very parlous state, and even if their treatment was not bad, they felt it a just grievance that they were thus unceremoniously thrown out of the regiment for which they had shed their blood. Thus to the medical organization detailed above an Administrative officer was added, the Spitalmeister, who had to arrange with the local authority for the proper housing and treatment of the sick or wounded who could not be carried with the Army, and pay for it.

During the campaigns between Germany and France on the Rhine and in Holland (1667-76) the medical service was extended. A Field Physician (Feldmedicus), a Staff Feldscherer, and an Apothecary with a field dispensary, were added to the General Staff, while the work of the Regimental and Company Feldscherer was placed under the supervision of a Feldmedicus and a Feldchirurgicus.

Friedrich I. of Prussia (1688-1713) introduced further reforms, making the Regimental Feldscherer responsible for the control of the Company Feldscherer, and for the supply of medicines and equipment.

For a long time one Groschen (one penny) had

been deducted from the pay of each private soldier for medicines.

But the first voice to make itself distinctly heard on the subject of the better organization of the Army Medical Service was that of Dr. Abraham Gehema, a Polish nobleman, who had served in the cavalry. Speaking both as soldier and as physician, he spoke with authority. His book, "Der Kranke Soldat" ("The Sick Soldier") exposed the weaknesses of the system, and the ignorance and worthlessness of the *Feldscherer* of that day. His words reached the public ear, and interest in the subject was aroused, with the result that in 1724 the famous Collegium Medico-Chirurgicum was founded in Berlin, and it was established by decree that no one could become a Regimental *Feldscherer* without going through a course of training at the Collegium. To this course Holtzendorff, the P.M.O. of the Army, added a course at the Anatomical Theatre, which had been founded in the Berlin Botanical Gardens in 1713. Two years later, 1726, the famous Civil Hospital "La Charité" was opened, where special provision was made for the instruction of military surgeons. It really originated in the requirements of the Army Medical Service, and the needs of the army doctor are still kept prominently in view in its organization.

The first definite instructions for the equipment of a Field Hospital were published by a decree of

Friedrich Wilhelm I. in 1734. It was to accommodate six hundred patients—four hundred in double beds, two hundred in single beds. Each patient was to have a mattress, pillow, and blankets. Each to receive half a pound of meat and a jug of beer daily, the cost of which was to be deducted from their own pay : while bread was to be sent in from each regiment for its own sick. The staff was to include four non-commissioned officers, twenty-four sick attendants, and twelve women for the cleaning, laundry and kitchen work. Full details of the standard equipment, medical and nursing staffs, utensils, diets, etc., were given.

Although Frederick the Great (1740–1786) took much personal interest in his sick and wounded soldiers, and gave large sums of money to schemes for their relief, little real progress seems to have been made in his reign, but a quiet study of the causes of the excessive mortality from disease and the after-effects of wounds was made, and in 1797 very important changes were effected.

The status of the Company *Feldscherer* had been already improved by his exemption from the duty of shaving the soldiery in time of peace : while the Regimental *Feldscherer* was raised to the position of supreme officer of health to his regiment.

The name pre-eminent in the military medical history in the wars against Napoleon is that of Goercke (1750–1822), and we see these two

great men, Larrey on the French and Goercke on the German side, working to the same merciful end.

He studied in all the great medical Schools, going from Austria to Italy, from Switzerland to Paris. In London he worked under the two Hunters, in Edinburgh he listened to the lectures of Bell and Hamilton. He joined the Army as a Company Surgeon in 1767, and eventually rose to the highest administrative posts in the service. He was the P.M.O. in the Rhine campaign, and accompanied Friedrich Wilhelm III. in the campaigns of 1806-7 and 1813-14.

After the Rhine campaign, Goercke's report dealt more especially with the insufficient supply of trained medical officers: he declared that in the event of war, two thousand one hundred and fifty-six surgeons were not too many for the number of troops that could be put in the field, and that there was no training institute for such a number. He was largely instrumental in founding in 1795 the celebrated "*Pépinière*," of Berlin. This training school for the Army medical personnel was of a strong and tenacious constitution, for it survived the founding of the Berlin University, and even the occupation of Berlin by the French, when the old Collegium was suppressed. In 1811 Goercke succeeded in his design of extending it into a Military Medical Academy, with "*La Charité*" Hospital for the clinical instruction of the students.

In 1806, when the Army took the field against Napoleon, its hospital arrangements were found to be too cumbrous. The character of battles was changing fast : the increased range of both artillery and musket fire, and the increasing mobility of troops, was greatly enlarging the area of battle-fields and causing huge numbers of wounded to be thrown upon the Medical Service at short notice, and with little opportunity of due preparation.

There was no Field Hospital on the spot at the battle of Jena. After the battle of Eylau, there was no one to take charge of the eighteen thousand wounded, until Goercke himself arrived, to find the medical service hopelessly inadequate.

The Board known as the "Directorate of Hospitals in the Field" was then abolished, and power was vested in the Chief of the Army Medical Service, which post was then held by Goercke himself. He used his power to organize very practical little "Flying Hospitals" of two hundred beds each, one for each of the six brigades, with Base Hospitals of twelve hundred beds for each of the three divisions of the Army. During the autumn of 1813 Goercke had established fourteen fixed hospitals along the Lines of Communication in Silesia, with their Base Hospital in Berlin, and they worked smoothly and well.

But again the mobility of the service proved insufficient. In the Hundred Days War, with Waterloo to wind up with, the Prussian service was

hopelessly outdistanced by the fighting forces. At Waterloo there were no Prussian medical units or hospitals, and only a handful of the regimental surgeons to render first aid. It is said that in the places where the wounded were herded in Antwerp, there lacked even straw for them to lie on : that they were piled in boats along the Arsenal quay : that they lay undressed, uncleansed, untended, poisoning the air with their awful stench : the helpless victims of an inadequate organization.

But when the Prussian Ambulances arrived they did excellent work. Between June and August some sixty small temporary hospitals had been established between Memel and Evreux, scattered over the country-side, where the arrangements were so good that the mortality was strikingly low, nine hundred and forty-eight deaths in forty-two thousand and ninety-two cases. And there were no such epidemics of infectious disease as usually raged in the Army Hospitals of those days, which immunity was attributable to the wide area over which the wounded were distributed.

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The casualties of the Allied Armies during that one day's fighting on the fields of Waterloo were nearly fifteen thousand English and seven thousand Prussians killed and wounded. When the Duke of Wellington picked his way across those stricken fields as the evening shadows came down, and saw

the awful cost of his great victory, his heart was wrung with distress for his brave troops. Immediately after he returned from the field he sat down and penned a letter, in which we see how the exultation of the victorious general is swallowed up by a most painful pity for the wounded and regret for the gallant slain. "My heart is broken by the terrible losses I have sustained," he wrote, "in my old friends and companions, and my poor soldiers. Believe me, nothing except a battle lost can be half so melancholy as a battle won; the bravery of my troops has hitherto saved me from the greater evil; but to win such a battle as this of Waterloo, at the expense of so many gallant friends, could only be termed a heavy misfortune but for the result to the public" (Creasy).

What an eloquent appeal from a great general in the hour of his victory, to the public in whose service he fought, to strain every nerve to reduce the unavoidable horrors of battle to their minimum.

A quotation from Hooper's account of the battle will give a better idea of what the wounded lacked—and were expected at that day to lack—than any list of what was officially supposed to be done for them. "The British Army bivouacked on the battle-field which they had won from the French. A profound stillness, broken only by the cries of wounded men and horses, succeeded the stunning

uproar of that tremendous conflict. The soldiers lighted fires, and some cooked their suppers in the cuirasses of their conquered foes. . . . The plunderers and marauders were abroad, pillaging and outraging the wounded, who lay beside, and often intertwined with the dead, sleeping upon the bed of honour. It was a terrible night. In strange contrast appeared the exultation of the living and the woes of the unsuccoured wounded." . . .

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From the narrative of Colonel Frederick Ponsonby, of the 12th Light Dragoons, who received seven wounds from which he miraculously recovered, we may catch a glimpse of the experiences of those among whom "the plunderers and marauders" were at work. He was wounded about three p.m., when Vandeleur's Brigade attacked the French Lancers, and the fighting continued another five hours. Almost immediately a French Tirailleur found him, and robbed him of all his valuables, leaving him huddled up "in a very uneasy position." Later a French officer stooped and spoke to him with kindly sympathy. Ponsonby expressed a wish to be removed to the rear, but "he said it was against their orders to remove even their own men" (!) However, he gave him brandy to drink, and directed a trooper to lay him straight and place a

knapsack under his head. A dying soldier, later, crawling, fell across his legs and lay there, greatly distressing him. Then came certain Prussians, who wandered in search of plunder: one examined Ponsonby, who told him he had already been robbed, but "he pulled me about roughly." "It was dusk when two squadrons of Prussian Cavalry, each two deep, came across the valley and passed over me in full trot, lifting me from the ground and tumbling me about cruelly. The clatter of their approach and the apprehensions they excited may be imagined. A gun taking that direction must have destroyed me." And he added: "I thought the night would never end." And thus simply he summed up his after-experiences: "I had received seven wounds: a surgeon slept in my room, and I was saved by excessive bleeding."

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In Germany, as in France, important changes in the medical organization followed the introduction of Conscription. The standing army was increased to two hundred and seventy thousand men at one bound, for which two thousand surgeons would be required in war-time, and the problem was how to get these trained, and how to afford their support in comparative idleness in time of peace. This problem was solved by releasing all those medical students from their period of compulsory service with the colours,

who signed an agreement to serve as Army Doctors in case of need.

The old incompetent Company Feldscherer and Chirurgus was abolished, and an "Army Hospital Corps" of surgeons and military sick attendants was formed, to which Bearer companies (Krankenträger) were added, in 1854. There followed two campaigns, the Danish War of 1864, and the more serious war against Austria in 1866. The stretcher bearer companies were then found to be neither numerous nor strong enough for their duties, and the whole medical work of the two campaigns was carefully studied by an influential Committee, with the result that in 1868 the official "Sanitäts Corps" of the Army was established. Although anticipating it by thirty years, this change had very much the same general effect on the German service as the formation of the Royal Army Medical Corps in England, and was formed on similar lines. Before this the Geneva Convention had been subscribed to by the European Powers, so at this point I will break off, for it is necessary to deal first with the Crimean and Italian campaigns, to make plain all the steps that led up to that great public recognition of the rights of the wounded man, and the sanctity of his sufferings. But I wish to point out that the breakdown of a purely official military medical service which my story shows was not that of one hastily organized

and ill thought out. In the case of the German forces, at any rate, there was a very complete organization and equipment, including even the innovation of hospital trains, with which to enter upon the Franco-German War. But though far more was effected by it on the field than in any previous war, it must be considered to have failed in large measure. The schemes of evacuation broke down, some hospitals became hopelessly clogged with cases, others remained empty. The Lines of Communication were confused by the transport of the sick being carried out on the same lines as that of troops and commissariat, and the administrative officers in charge were so overworked, as of old, that they relegated the requirements of the medical service to a secondary place.

After this war, in 1878, a very complete new series of regulations was issued, to remain in force with scarcely any change to the present day : but in this the supplementary work of voluntary societies was recognized and given its due place in the whole scheme.

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There are a few points of special interest in the history of the Austrian Army Medical Service which deserve a place in this sketch of a subject which, with all its various ramifications, covers a large field of inquiry. But I am endeavouring

to bear in mind that it is the growth of Ideas and the Experiments which have produced the complex modern organization which I have set out to illustrate, and so I am picking up, here and there, as they occurred, the facts and stories which fit into this design. Tales of individual heroism and tales of individual suffering alike are out of place; and it is likewise unnecessary to go into the detailed history of every European official medical service: the rough outlines of these three is quite sufficient for my purpose.

One of the notable points about this Austrian Service is its early and close connection with civilian sympathizers. It was not induced to show this conciliatory spirit by any greater readiness to submit to outside criticism or co-operation than is shown by the majority of official bodies, but by poverty. It was the public money that it required, and to obtain this it had to admit the public a very little way into its confidence.

It first admitted the need for a more costly and efficient service towards the end of the sixteenth century, by placing alms-boxes in all the Churches for the collection of money to ameliorate the condition of the sick and wounded, and to maintain Hospitals for them. It was only in the seventeenth century that arrangements for the wounded were definitely taken over by the State, and these were still very inefficient through lack of funds.

A Memorandum on "Military Economy," dated 1673, points out that the majority of the lives lost in the campaigns in Austria and Hungary under Prince Eugene of Savoy, were lost through sickness and want, and that the sum required to finance a medical officer and an apothecary with a few drugs, sufficient to enable one thousand men to be restored to the ranks, would be only a quarter the sum needed to supply recruits who would be of less value by one-third than the wounded veterans they replaced. I do not know who wrote this Memorandum, but his logic appears unanswerable.

The Lottery as an institution in Austria had its inception in the need to raise money for medical purposes: in 1696 the first State Lottery was established to pay the expenses of a military hospital. Which shows that, though the need was recognized, parsimony in high quarters was still starving the service, in spite of the wisdom of the Memorandum quoted.

Prince Eugene of Savoy interested himself in the medical service, and constantly complained that its inadequacy was a cause of serious inefficiency in his forces. In his campaign of 1704, when with the English under Marlborough he fought the French and Bavarians at Blenheim, he caused water-carts to accompany his troops on the march, to supply water to the sick and those who flagged. He was struck by the suffering and loss which followed the practice of carrying the wounded long

distances to hospital, jolting them over rough ground and up precipitous hillsides in his Italian campaign, and he directed the establishment of small Field Hospitals at convenient centres. Both men and women acted as sick attendants in these hospitals, but their numbers were so inadequate that Prince Eugene concluded an arrangement with the French General to have all the medical personnel of either side restored immediately if taken prisoner : a foreshadowing of one of the most important provisions of the Geneva Convention. Many of the Prince's notable military successes were attributable to what was considered by the English at that day the unnecessary and grandmotherly care he took of his fighting men and his wounded.

The eighteenth century, especially the period of war in the latter part, saw many important developments in the Austrian Service, amongst them the establishment of a Training College for Army Surgeons. Maria Theresa took the deepest interest in it, and Joseph II., her co-sovereign and Commander-in-Chief of her Armies, was closely acquainted with its conditions. His able adviser was Brambilla, his private surgeon and P.M.O. of the Medical Service from 1778 onwards. Under him the whole character and work of the service was completely transformed. By a regulation issued by Maria Theresa in 1749, Convalescents and soldiers unfit for the hardships of the fighting line, had been appointed to act as sick attendants,

a bad practice that is largely in force in the Austro-Hungarian Army to the present day, and was copied by most of the European services. The proportion then laid down as necessary was one to ten patients for ordinary cases, or one to five if the cases were very severe.

One of the new directions in which Brambilla effected a much-needed reform was in the distribution of the wounded after a battle. In the Austrian, as in the German Army, a "Spitalmeister" was responsible for making all arrangements with local authorities after a battle for the boarding-out and treatment of those soldiers too ill to be moved with the army: with the addition of certain married soldiers (Unterspitalmeister) of the Company, who with their wives were left to act as sick attendants to these. But since this necessitated collecting the wounded as near their own regimental lines as possible, and their after comfort was largely dependent on the personal ability and devotion of their regimental Spitalmeister, much distress, neglect and waste resulted from this system. Therefore, Brambilla devised a hospital organization, the general principles of which are followed in every modern service.

The Hospitals were divided into three classes:

1. Local Hospitals, arranged in any convenient building, for the temporary treatment of slight cases and the housing of those whom it would be dangerous to move.

II. Flying Hospitals, to be opened as near as possible to the spot where the Army would require them: wooden huts, carried in sections, were to be erected for these by the regimental carpenters.

III. Main Hospitals, for cases requiring long and elaborate surgical or medical treatment and careful nursing.

Brambilla's scheme laid down the numbers of medical officers required as five hundred and fifty-seven for an Army of four hundred thousand men, exclusive of the Hospital Staffs. These were calculated on a liberal basis, the Flying Hospital to have four hundred and thirty-one, the transport ninety-eight, and the Headquarters Staff twenty-eight Medical Officers or assistants. For Main Hospitals ten Senior Medical Officers were appointed for every five thousand patients, with a staff of two hundred assistants.

In the campaign against Turkey, Brambilla had two comparatively new problems to deal with. At one time half the total force which should have been at Joseph II.'s disposal was rendered ineffective by typhus, scurvy, or dysentery. Brambilla dealt manfully with the two last: vanquishing scurvy by issuing sauerkraut and horse-radish with vinegar to all the troops, and devising stringent regulations as to the boiling of all drinking water and its filtration through linen or flannel.

The other problem was the utter absence in Slavonia of houses suitable for conversion into

temporary hospitals : and this was the first occasion on which the Medical Service carried all its own hospital buildings with it. These consisted of twenty-four large wooden huts constructed in Vienna, which with their full equipment were sent down the Danube on barges.

The Army Medical School with Military Hospital of twelve hundred beds attached, which was opened in Vienna in 1785 is still in existence to-day as No. I. Garrison Hospital. While the more ancient " Joseph's Akademie " is now known as the Army Medical College.

In 1808 more complete and elaborate regulations were added to those of Brambilla, in which special attention was paid to the provision and training of Bearer Companies and transport for the wounded (*Sanitäts compagnien*), which were so satisfactory that both the Prussian and Russian, among other European services, have been modelled upon them.

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I have given here particular details of the growth of these three State Services, the French, German and Austrian, because each contributed something special to the story. The French deserve honour for the first attempts at transport organization : the German for the serious recognition of the importance of the training and organization of the Medical Officers : the Austrian for the classification and arrangement of Field and Base Hospitals.

The special contributions of Great Britain, in the Nursing Service—and of America in Organized Civilian Aid—will be dealt with under the heads of the Crimea and the American Civil War, respectively.

The constitution of the English Army Medical Service I have likewise left to be dealt with when it can be brought actually up to date, for it always lagged considerably behind those of the Continental nations in its organization, and the pioneer work during this century of growth and development was done by others.



STHÉNELOS BANDAGING DIOMEDES.

CHAPTER VIII

1813-1859 A.D

Civilian Work on the Battle-field—Frankfurt—The Sonderbund War—
A Manual of First Aid—Medical Problems of the Eighteenth and
Nineteenth Centuries.

WE have reached the beginning of the nineteenth century, to find in each of the principal European armies a medical service attached, sufficient in its own opinion, resentful of public criticism, ready to snub public philanthropy. Formed on the right lines, served with honesty and even enthusiasm, these services are deserving of more credit than we are ready to give them, and must not be individually blamed for their lamentable failures, which inevitably resulted from the breakdown of a rigid and inelastic system. The individual always suffers under such circumstances, and blame that has been little deserved falls on heads that have done their best in their very cramped and attenuated spheres. But the wounded soldier was still to suffer horribly, and

we naturally lay about us lustily when faced with his undeserved woes. The great fact of the interdependence of official and voluntary organizations had to be burned into the public heart, which was to be seared by the hot iron of unspeakable calamities before it learned its lesson.

Of old time a scattered and local philanthropy had done its weak best for the soldier, the civil surgeons had slaved amid appalling difficulties on the battle-field, and both of these had thankfully handed over their tasks and their responsibilities to the State Services, which they found only too willing to take them on and bow the amateur workers out of the field. That was the great mistake that was made by the States; they should have kept the volunteers, disciplined them, and made them work along prescribed lines.

Europe was not without object-lessons in the great value of volunteer and auxiliary effort in war. Among these may be noted the "Frauenverein" of Frankfurt in 1813. There was no auxiliary relief work for the wounded during the Napoleonic wars, but the women of Frankfurt watched their husbands, brothers, and sons being swept away by the tide of battle, and they banded themselves together for their aid. Out of Frankfurt marched the "Landwehr" army in the colossal military effort of the German States, and the women left behind organized the "Frauenverein," which gathered stores for military hospitals, made dressings,

collected linen and money for medical comforts, and made arrangements for the relief of the destitute families of the slain. The Society was formally constituted in February, 1814. Three ladies whose names deserve an honoured place among those women who have had the courage to see and answer to an universal need, Mmes. Antonie Brentano, Sophie di Neufville, and Rosetta Staedal, issued a public appeal for funds. These poured in, along with offers of personal service. During the war they distributed twenty thousand eight hundred florins in money, nineteen hundred shirts, two thousand two hundred pairs of stockings, two hundred sheets, and seven hundred ells of linen. They gave relief to volunteer soldiers, to French prisoners and sick, and to the stream of destitute Spaniards returning from captivity in French fortresses. After the tide of war had ebbed, the "Frauenverein" occupied itself over a severe epidemic of typhus. And in 1815, when Europe was set afire by the dramatic return of Napoleon from Elba, it was again active. Allied Committees of ladies in other German cities collected funds and material, which were distributed wherever the need was found to be greatest. After a long period of quiescence, the Franco-German war gave it further scope for its benevolent activity, and it did most excellent work. Within a fortnight of the outbreak of war, it had formed "Sanitäts compagnien" of one hundred

and eighty men, as stretcher bearers and first-aiders.

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Another voluntary organization deserves mention here. The "Sonderbund" War of 1847 in Switzerland broke out at such short notice that there was no time for the efficient extension and mobilization of the Army medical service. Fortunately the fighting was of short duration and there were comparatively few casualties, or its breakdown would have been disastrous: Dr. Flügel, the P.M.O. of the Army, openly lamented its insufficiency. But in Zurich a small party of friends formed a "Société de Secours" which quickly rose into prominence, and is of some historical importance.

On the 5th of November this party of friends, eagerly assisted by the medical men of the city, set about collecting money and stores, organizing volunteer Bearer Companies, and improvising their own Ambulance wagons. Their first task was to design more suitable carriages for the rapid transport of the wounded from the battle-field. On the 8th of November the two first carriages were tested, one accommodating four wounded lying down, drawn by two horses, and one for three wounded, drawn by one horse. Their utility was so evident that six of the first and twelve of the second pattern were immediately ordered. They

arranged regular Ambulance parties, with one of the large and two small carriages, bearers, and attendants, and a surgeon in charge, each section being accompanied on the field by one or more members of the Society as administrative officers in charge of stores and directing their distribution.

The publicity this scheme received secured it general support: private people sent stores and carriages and voluntary workers. Women were again in the forefront of the work, furnishing and serving in two Base Hospitals, one at Aarau and one at Halden, where the public liberality ensured a completeness of equipment that had never before been attempted in a war hospital. But the war was of such short duration that the work was soon ended, and the Society disbanded.

Although it probably had no idea of this, its most useful work was not the relief of its own fellow-countrymen, but to serve as an object-lesson and a model to all the civilized world of what might be accomplished, under efficient administration, by voluntary effort in supplementing the official medical service.

The next landmark in the history of the voluntary or civilian side of the Ambulance movement is the "Sanitary Commission" of the American Civil War.

There we see the influence of universal service upon public opinion as regards the health and safeguarding of the troops in the field, and the tending

of the wounded. The fearful wastage of life during the Napoleonic wars had this result, that the supply of vagabonds, bad characters, and low class soldiers for whom rough treatment was considered all that was required or deserved, was exhausted, and the ranks were perforce filled by the best men of the Continental nations. And national concern for their welfare naturally followed. Add to this principle of conscription, the quicker dissemination of news, the presence of newspaper reporters with Armies in the field, the spread of education and the greater consequent power of the Press, and we see how it was that when the State Medical Service broke down in the Crimea, men and women were not content till they knew why they had done so, and what might be done to improve their efficiency. In this connection the name of W. H. Russell, the *Times* correspondent in the Crimea, will ever hold an honoured place in our memories. The courageous and unsparing exposure of the actual condition of our troops in the field contained in his letters to the *Times* awoke echoes in every home in England whence sons had gone to the front: echoes whose voices no power could silence.

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Several civilian societies for the rendering of "First Aid" had been started in different European cities in the eighteenth century: notably at

Amsterdam, Hamburg, Venice, Milan, Vienna and Paris. In 1773 Dr. Alexander Johnson was so well persuaded of the utility of thus spreading a knowledge of the first simple measures to be taken for the preservation of life in cases of emergency, that he published in London a modest tract entitled "A Short Account of a Society at Amsterdam instituted in the year 1767 for the Recovery of Drowned Persons, with Observations showing the Utility and Advantage that would accrue to Great Britain from a similar Institution."

To this he added "A Collection of Authentic Cases, proving the practicability of extending the benefits of their practice to the recovery of persons visibly dead by sudden stoppages of breath, suffocation, stifling, swooning, convulsions and other accidents."

For the publication of this very early "Manual of First Aid," he excuses himself on the title-page: "When any Discovery of real Utility to the World is made, it is the Duty of every Man to render it as universally known and beneficial as possible."

Of these foreign societies he explained that "their first object was to inform the common people, as well as the inferior practisers of physic, in what manner to treat a person apparently lifeless; and the second was to animate them by proper rewards to pursue the methods recommended." In the Instructions for the restoration

of the apparently drowned, they “gave caution in the first place to forbear from practices very common in most countries ; such as rolling the body over a cask, or tying it up by the legs with the head downwards,” and they directed firstly, “to force air into the body, either at the mouth or up the intestines, recommending the stimulating vapour of Tobacco as more efficacious than common air ; and in the next place, to strip off the wet clothes, and as soon as possible apply external heat to the body, by means of fire, of friction with flannel cloths, or the natural warmth of two persons in bed, taking the body between them.”

The stories that follow illustrate very forcibly, not only the absurdity of the popular methods these authoritative directions were intended to supersede, but the obstinate intention of the sufferers to recover in spite rather than because of the treatment they were given !

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Among the changes in the organization of the Army Medical Services, it must not be ignored that the medical side of the question has likewise undergone change. Many of the problems which faced the military surgeon in olden days are now non-existent, or reduced to insignificant proportions, while new ones have cropped up to take their place.

The most notable of the changes is the corollary

to the change from cutting to explosive weapons. Whereas the army surgeon was formerly chiefly concerned with hæmorrhage, he is now especially concerned with sepsis. In the case of sword cuts, and even arrow wounds, primary Hæmorrhage was the chief cause of death. The surgeon endeavoured to be on the spot to tie up the wound and exert pressure on the ruptured artery, and, this accomplished, little more was possible or necessary. Where his knowledge and appliances were insufficient to stay Hæmorrhage, the case usually proved fatal. But gunshot wounds do not, as a rule, occasion primary Hæmorrhage sufficient of itself to cause death. Even in cases where a large blood-vessel has been severed there is often no serious Hæmorrhage for some hours: when death occurs very swiftly the wound is usually so extensive and complicated that there would be no hope of cure with or without the addition of severe Hæmorrhage.

As far as the surgeon was concerned, the firearms and projectiles that I have previously described, and the wounds caused by them, remained the same during the Peninsular War (1808-14), the American War (1812-14), and the wars in Asia and the East. Accuracy of aim was impossible: the bullets were irregular in flight and of a low velocity. In the time of the Hunters leaden bullets were cast in moulds, whereby impurities and air bubbles were introduced and caused shattering.

The smooth-bore musket, "Brown Bess," was the one in general use. It was not till the early part of the nineteenth century that a rifled musket was supplied to the troops, with double the certainty of aim and the velocity of the old Bess.

John Hunter served as Staff-Surgeon with the Army in Belle Isle and in Portugal till 1763, and it was at Belle Isle, after the reduction of the citadel, that he wrote his celebrated "Treatise on the Blood, Inflammation, and Gunshot Wounds."

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With the old bullet there was a great deal of bruising of the tissues surrounding the actual wound, as I have previously noted, and this no doubt presented a favourable site for the septic infection of what was known as Hospital Gangrene. This was allied to Hospital Typhus, and was caused by general insanitary conditions and lack of antiseptics for the treatment of wounds. Such terrible epidemics as former military surgeons had to deal with are now fortunately unknown. During the Peninsular War the mortality was frightful: in the Hospitals of Santander, one thousand six hundred and fourteen cases (Guthrie); at Bilbao, after the battle of Vittoria, one thousand cases and five hundred and twelve deaths, and this in spite of the Hospital being in a very healthy situation, with sea air and good weather to aid

recovery. Dr. Hennen, who here made very valuable studies of the disease, attributed it to lack of bedsteads and the great crowding of patients, who lay on straw on the ground, with the result that the floors became unavoidably filthy and infection spread very rapidly.

In any large military hospital after a battle there are crowded together a very large number of open wounds all simultaneously reaching the same stages of active suppuration, thus poisoning the air and infecting one another.

Hospital Gangrene raged in the overcrowded hospitals of Antwerp after Waterloo; but in the small scattered Prussian hospitals established in the surrounding villages few deaths occurred from it.

In the Crimea, after the advent of Florence Nightingale and the sanitary reforms she introduced, the British hospitals were practically exempt from its ravages, only one very insanitary little hospital having an epidemic of it, and it was never endemic.

In the French hospitals, on the contrary, it was very prevalent, and was pronounced to be "contagious both mediately and immediately and by inoculation" (Lequest). It was epidemic in the hospitals both of the Crimea and Pera, and in the French Hospital Ships. In the early part of the War it broke out also in the British Hospital Ships going to Scutari and Malta.

During the Indian Mutiny, Hospital Gangrene raged in the hospital at Lucknow, almost every case of an open wound becoming infected. The Residency Hospital arrangements were necessarily bad, as in spite of the great heat the windows had to be closed and barricaded and ventilation was very difficult. The diet of the patients was poor and unsuitable, and there were few disinfectants available. The medical officer, Dr. Arthur (Surgeon of the 1st Madras Fusiliers) declared that there was not a single successful amputation of a leg during the whole siege. Strong nitric acid was the treatment he used for the sloughing wounds which showed early symptoms of Hospital Gangrene.

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A scourge which presented a difficult problem in former wars and now seems to be conquered, was Tetanus, or Lockjaw. Although it is difficult to find out any very exact statistics of the eighteenth century military hospitals, we can obtain some idea of its prevalence. Sir James McGrigor speaks of "Several hundred cases" in the Peninsular War, and adds: "This very formidable disease has always been prevalent among the wounded after great battles."

Admiral Rodney, in the West Indies (1782), renders an account of "five hundred and forty-four wounded men on board ship or on shore;

seventeen died from lockjaw, three recovered. Total deaths, eighty-eight." Thus we see that of the wounded, one in every twenty-seven was attacked by Tetanus, and one in five of the deaths was caused by it.

It was estimated by Sir G. Ballingall, in 1838, that among the wounded after any battle there would be at least one in seventy cases of Tetanus. In the Indian Mutiny (1857) it was a great source of mortality, especially among the native troops, though it attacked both the European and native wounded in Lucknow.

In the Crimea it first showed marked signs of abating, since there were only twenty-four cases reported among the British and thirty among the French wounded, all ending fatally.

In Italy in 1859, Dr. Chenu states definitely that there were one hundred and fifty-three cases of Tetanus treated in hospital, but this number probably includes the Austrian prisoners with the French and Italian wounded.

In the Transvaal War, Tetanus was practically unknown, which points to the enormous advantage of a more rapid transport service and of sterile field dressings immediately applied to open wounds by the soldiery themselves. For the bacillus of Tetanus is common in earth and dirt and is introduced through broken skin. For this reason the small numbers attacked during the long Crimean War, in spite of the slow and inadequate transport

of the wounded, may be partly attributable to the snow and frost which hardened the ground through the winter months.

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Another thing that the modern use of the Field Dressing and antiseptics is able to combat is the repulsive occurrence of larvæ in wounds, which was formerly a great source of trouble. Flies are always a plague in hot countries: in Egypt and in the Crimea they were especially distressing. They endeavour to lay their ova in the wounds, whose odour attracts them and where they find warmth and moisture. Baron Larrey, in his account of the Egyptian campaign under Napoleon, notes the frequency of larvæ of the common blue fly in suppurating wounds, describing maggots as forming in a few hours and increasing to a large size in a day.

During the Indian Mutiny the plague of flies was awful, and served to retard the healing of wounds, and to spread infection.

During the American Civil War it is stated in "The Surgical History of the War" that: "The presence of maggots in wounds, in the Field and Camp Hospitals, was frequently an annoying complication. After protracted battles, such as the fighting in the Peninsula in June and July, 1862, and after the Wilderness and Spottsylvania in 1864, when the means of transport were not

sufficient to move the wounded rapidly to permanent hospitals, and when the number of attendants was entirely inadequate to the demand, maggots were found in abundance in and beneath the dressings and in the wounds. In well-established general hospitals the presence of maggots was rarely noted."

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The nineteenth century was to make two notable contributions to Surgical Science, through which the Hospital treatment of wounds was revolutionized, with the reduction of the average mortality from, roughly speaking, forty per cent. in 1860 to four per cent. in 1880. These two great gifts were "Anæsthetics" and "Antiseptics."

While Lister was working quietly at his Germ Theory of Disease, the scientific world was stumbling across the natural anæsthetics in the apparently accidental manner in which so many valuable discoveries have been dragged into the light. In the ancient world the use of narcotics and vapours to produce insensibility was known and practised here and there. And in Europe in the sixteenth and seventeenth centuries their use was not entirely unknown. But it was not till 1800 that Sir Humphry Davy first suggested the use of nitrous oxide gas (laughing gas) in surgical operations, having discovered its anæsthetic properties. No general advantage was taken of this harmless

pain-killer for nearly half a century, and the great importance of lessening the shock and reaction by the use of an anæsthetic during an operation was not yet recognized. It was then chiefly respected for its assistance in keeping the victim quiet.

The inhaling of sulphuric ether before teeth extraction was an American contribution to the subject; though ether was first used for surgical operations in December, 1846, by Liston, the London Surgeon. In the following year Sir James Simpson discovered the virtues of Chloroform, and thenceforward "Anæsthetics" were established in general use in the operating theatres of the world.

In 1859 Dunant records that in many of the military hospitals of Northern Italy, after the battle of Solferino, Chloroform was in use, but he expresses the popular distrust of anæsthetics. After describing a very ghastly scene of the amputation of a leg in an advanced state of mortification, the unskilled nurses who held the patient, his terrors and agonies, and the difficulties met with by the surgeon who performed the operation, he might have been expected to advocate their use. "In a neighbouring hospital," he says, "chloroform is used. Some patients are chloroformed with difficulty, accidents result, and sometimes it is in vain that they try to revive a man who a few minutes before was speaking."

But with increased experience of their properties and improved skill in administering them, popular prejudice was gradually overcome.

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Lister's great discoveries of the manners and customs of the destroying bacillus were not made available till a later date. His first remarkable paper, "Early Stages of Inflammation," was published after the Crimean War, in 1859; while the more comprehensive, "The Germ Theory of Disease," was not given to the world till 1875.

But the whole method of treating wounds was gradually changed during the century, and the important fact was grasped that the putrefaction of a wound was an evil that could be prevented. The free drainage which is so strong a point of modern surgery was first attempted, in distinction to the ancient method of shutting up the wound without effectually cleansing it, whereby impurities were imprisoned to play havoc with the surrounding tissues.

CHAPTER IX

1854-1859 A.D

The Crimean War and the Nursing Service—Florence Nightingale—
The health of the troops—Henri Dunant—The Battle of Solferino.

THIS is probably the best known period that I have yet dealt with: there are few who have not thrilled to the tales of the hardships and sufferings undergone by our troops in the Crimea, and the unhappy state of the wounded after the great battles of the War. There is an awful sameness in these stories, and it appears to me that a mere repetition of horrifying details is unnecessary to the main object of this book. I am not trying to stir public sympathy or enthusiasm, but to present a coherent picture of the development of a great work.

I have shown the regular medical services being attached to the Armies of the civilized powers. As these grew more competent, enlarging their scope and their equipment, the natural illusion

followed that they would be sufficient to cope with all eventualities, and the public went comfortably to sleep. The period of exhaustion which followed the Napoleonic Wars fostered this spirit of lethargy, and was among many causes which produced the utter breakdown of the English Army Medical Department in the Crimea. In peace it had been starved, snubbed and trammelled; it was subordinated to every other interest, and its Director-General laboured in subjection to five other Departments. So little real power had Dr. Andrew Smith, Director-General since 1835, beyond his own office and staff of six clerks, that if he wanted to send any medical comforts or necessities to the Hospitals abroad, such as sago or wine, "he must inform the Horse Guards, and the Horse Guards must move the Ordnance, and the Ordnance must instruct the Admiralty, and the Admiralty must give orders to the Victualling Office, which must make arrangements with the Transport Office, which must get the assistance of a private shipowner to get the article to its destination." (Kinglelake.)

Dr. Andrew Smith did his best, entangled in the net of an impossible system, which broke his heart and nearly exterminated the Army in the Crimea. The weakest point of this system was the very general custom of disbanding in time of peace the troops levied in time of war. Not only

the regiments, but the Departments which controlled and served them were thus thrown into dire confusion. During the Peninsular War the Army, which even after the losses of the war numbered two hundred and forty-six thousand men, was in a highly efficient state, its organization into Divisions had been a great success, its commissariat and transport systems were complete and adequate. After the war this Army was reduced by two-thirds, to seventy thousand, and every administrative Department thrown into utter disorder and left to disintegrate.

Upon the unfortunate Army Doctors of that time, the historian of the Crimean War has thus passed judgment. "Ill-salaried, ill-treated by the State, schooled in the habits of resignation, and bending under a load of professional work which they performed with a genuine zeal, the medical officers acted as though there should be no discontent—as though, not only on behalf of themselves, but also on behalf of their patients, they ought to accept all the miseries which crowded in on the hospitals as dispensations resulting from war—dispensations to be borne with that silent, that soldierly fortitude which disdains the resource of complaint; and they even indeed went the length of refusing to acknowledge a want." (Kingleake.)

"This stupid submission to things as they were, this inability to struggle and clamour for better

things, was a source of a great part of the evil.”
(Sandwith.)

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But since I am not attempting to write a surgical history of this war, which has been already done by far abler pens, I am here going to make a digression from the Army Doctor into a different province—that of the Nurse. Amid all the confusion, waste, and horrors, and the shedding of blood and tears in the Crimea, Britain’s priceless gift to the wounded soldier of all nations was offered and accepted. It is the Awakening of the Women that is the significant event of this period.

The modern nurse was created; she first took her stand by the bedside of the wounded soldier, as she was thenceforward to take her stand by the sick beds of civilian life. She was Great Britain’s special contribution to the Ambulance Problems of the world.

The name that leaps to the tongue at any mention of the Crimea is not that of the distinguished Generals who won or lost battles, but of Florence Nightingale, the woman who taught the world how to nurse its soldiers. Not only this, but she practically invented the Hospital-trained Nurse, who is so prominent a feature of present-day life.

Although home nursing has been woman’s work through all the ages, as a profession for which

she trained and by which she earned her living, Nursing was non-existent until this date. A State Training School for male nurses had been established in Magdeburg in 1799, a heritage from the monastic orders of the Middle Ages, and men were largely employed in hospital wards all over Germany; but though in Catholic countries the Religious Sisterhoods did what we call real nursing, in England and all Protestant countries the women employed in hospitals were seldom more than Ward Maids and domestic servants.

The first training institution for women nurses was opened by Pastor Fliedner at Kaiserswerth in 1836. Here Florence Nightingale studied, and through her this modest foundation has had a tremendous and far-reaching influence upon the work of nursing in modern times.

In 1838 the Quakers of Philadelphia started a Nursing Organization which trained and sent out nurses to work in the homes of the poor. This was copied by Mrs. Fry, who opened an Institute of Nursing Sisters in London in 1840. This had as many as ninety nurses on its staff in 1857, who received practical training at Guy's and St. Thomas's Hospitals. In 1848 St. John's House, a Church of England Nursing Institute, was opened in London, whose nurses received their training at King's College Hospital, and supplied the wards with nurses, as well as keeping a large staff for work in private houses. These nurses



From a drawing by C. Kenneth Bird.

"THE LADY OF THE LAMP."

Florence Nightingale visiting the sick in the British hospital at Scutari.

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were divided into three classes: sisters, probationers and nurses. This Institute is still in existence and doing useful work on modern lines.

Thus the foundations were laid, but it remained for the Crimean War to lift Nursing from a work of piety and charity to the position of a national duty and a noble profession.

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Born in 1820, at Florence, Miss Florence Nightingale was the daughter of William Nightingale, of Embley Park, Hants, and Lea Hurst, Derbyshire, and was brought up in affluence. But an energy of spirit and a devotion to the task of nursing unusual at that day, caused her to give thirteen years to a study of this work after her education was finished. She visited the Hospitals, civil and military, of London, Dublin and Edinburgh. Then she went to Paris, where she studied the nursing and administrative arrangements of the civil hospitals, and lived and worked among the Sisters of St. Vincent de Paul, the largest of all the Nursing Sisterhoods. From there she went to Kaiserswerth, to the Protestant Institution founded by Pastor Fliedner, and worked for six months in its wards.

On her return to England she found a benevolent work in the rescue of the "Governesses' Sanatorium"

in Harley Street from ruin, and by wise administration and the gift of considerable sums of money she put it into a position to continue its useful work. This Home is still in existence as the "Florence Nightingale Hospital for Gentlewomen during temporary illness," in Lisson Grove, N.W. Here Florence Nightingale took up her residence, and put into force, in the training of the nurses she engaged to tend the sick and aged inmates of its wards, the knowledge of the principles and practice of nursing which were the result of her studies. This brought her and her theories to the particular notice of a large circle of friends, and to the notice of the right man to use them for the salvation of the British soldier.

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By October, 1854, those terrible stories of hardship and death had reached England. W. H. Russell's pen had been dedicated to the honest service of the ill-fed, ill-housed, ill-clad British soldier; he had seen the lamentable state of the wounded man, and he told his countrymen the unvarnished truth. Lord Raglan and the Generals were doing their best, the heroic Army Doctors were doing their best in heart-breaking conditions—and Mr. Sidney Herbert, the Secretary for War, did his part also. He wrote to Florence Nightingale, giving his views of the need for women to nurse in the Hospitals, and imploring her genius

for organization and womanly tact for this crisis. With a startling and dramatic fitness it happened that this letter crossed in the post one from Florence Nightingale herself, offering her services. A fortnight later, on October 24th, she left England with a band of thirty-seven nurses, some trained in the hospitals, some volunteers, some Catholic Sisters, and Mrs. Bracebridge, her own devoted attendant and companion in all her works and dangers. This band of dedicated womanhood, the pioneers of such a work as had never before been attempted by their sex, reached the Bosphorus on November 4th, and looked their first on the scene of their labours. Up into the sky towered the dark heights of "Bûlgurlû Daghi," white mosques and gleaming palaces and the gardens of a fairy world climbing up its wooded slopes. The great city, with its marble domes, snowy minarets, mysterious windowless houses, dark cypress trees and shadowy alleys, came into view; and there stood the great yellow stone quadrangle of the Barracks of the Turkish Imperial Guard, now become the British Hospital at Scutari. As the Hospital Ships winged their way across the waters with their awful burden of stricken men, the sight of that glittering city and the dominant yellow block of the Hospital must have seemed to straining eyes like the gate to Paradise. Up the steep slope from the landing-stage to the great gateway there crawled the

dreadful harvest of war. In the six weeks from December 1st to January 20th, 1855, eight thousand sick and wounded were transported on litters and cacolets from Sebastopol to Balaclava, where they were embarked on so-called hospital ships for the four or five days' voyage from Kamiesch to Scutari. There was entirely insufficient accommodation for them on board these ships; no beds or cabins for at least half of their ghastly burden, scarcely dressings or doctors or food and drink to go round. Their condition of filth and fever and infectiveness can be better imagined than described. Soon there followed on the heels of this eight thousand the six hundred wounded from Inkerman, and the great Hospital had received within its walls the awful total of ten thousand desperate cases, when only the strongest had survived the long agony of transport.

Even before Sebastopol, it is estimated that there were seven or eight thousand men in the hospitals of the Bosphorus, out of an army of twenty thousand, and the effectives themselves were weak from wet, cold and hunger.

And there in the Barrack Hospital Florence Nightingale found all the old insanitary conditions, with the revolting details of which we are now only too familiar—lack of utensils, lack of bedding, lack of clean clothing and lack of discipline. Infinite tact was needed to get her ideas adopted by the jealous military and medical

authorities, but the battle was won by these grand women on their knees. Down went the Catholic Sisters, the London trained nurses, the lady volunteers, upon their knees, and *scrubbed the floors!* They washed the linen, and finding but seven shirts in the whole hospital which could be washed, they purchased more with their own money; they procured suitable food and cooked it themselves for the sick, they reorganized and transformed the kitchen department. With the labour of their hands, and their gentle deference, and the practical usefulness of their work, they won the day. Soon all prejudice had died a natural death, everyone ran to do the bidding of that wonderful woman, who saw with clearer eyes than her generation the priceless worth of cleanliness, fresh air and pure water.

The English Ambassador at Constantinople, the General in Command at Scutari, alike found a point on which to concentrate their efforts. Lord Raglan had already established small hospitals in various places in the Levant, Dardanelles, Rhodes and Smyrna, with a few floating Ambulance Ships; but by far the greater number of serious cases were at the hospital in the Turkish Barracks. All these smaller hospitals were visited in turn by Florence Nightingale, and their nursing and kitchen services organized, while Military Kitchens for the troops in the field were devised on a new basis by her, with the aid of M. Soyer, the French Chef.

The huge sums of money subscribed by Government and the public were expended under her direction, and she received all gifts in kind and distributed them according to the requirements of the medical officers. Miss Mary Stanley, daughter of the Bishop of Norwich, followed her some months later, with a party of forty-six volunteer and salaried nurses, who materially assisted in the work. And thus they imitated their inspired leader, who "came, a gifted, well-born woman, with no official red tape to bind her, and no ancient formulas to hamper her, and she swept the old abuses aside in a way which seemed miraculous to those hide-bound officials who looked on in wonder. She had to fight her way inch by inch, through a dense forest of prejudice, but she fought with a woman's tact and patience and sympathy, and in time she broke down the ill-will of many who at first thought that a lady should not mix herself in matters so ugly, miserable, and sordid as much of her work necessarily had to be." (Sandwith.)

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The death-rate in the Hospitals soon showed the effects of her measures of cleanliness and order; it had been inordinately high. Even in February, 1855, it was still forty-two per cent. in the Hospital at Scutari; but in March it dropped from thirty-one per cent. to

fourteen per cent., in April from ten per cent. to five per cent., and thereafter remained between two and three per cent., which was exceptionally low for a military hospital in war-time. But in this connection it must be remembered that the worst cases did not survive the long transport thither.

Shrimpton has pointed out that the tremendous mortality in war hospitals was merely an aggravation of the evils of the civil hospitals in time of peace. "The sanitary state of our hospitals is one of the grave questions of our day," said he. "Every condition is so bad that patients cannot recover, wounds cannot heal, and the gallant efforts of Doctors and Surgeons are rendered abortive." He accused the Hôtel Dieu of being "the Haunt of Death, and existing only to devour victims." By law the Hôtel Dieu was forbidden to refuse admission to any one who sought it, and in 1773 there were actually five thousand patients crammed into its insanitary wards, with their large old-fashioned beds.

In England there was no such overcrowding, but knowledge of Hospital hygiene was still in its infancy. Netley Hospital, on the shores of Southampton Water, our chief military hospital, was commenced at the time of the Crimean War. During the outburst of public interest in the subject immediately following the war, efforts were made to get its construction altered, of which

the system is considered to be inherently bad, but in vain.

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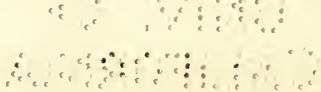
Florence Nightingale did not leave the Crimea till Turkey was finally evacuated by the English in July, 1856, and then her work was by no means finished, though her health was permanently broken by her great labours. The fifty thousand pounds raised by public subscription as a gift from a grateful nation she used to found the Nightingale School for Nurses in connection with St. Thomas's Hospital, which has been the model for the training of professional nurses ever since. She also drew up, at the request of the Government, a Confidential Report on the working of the Army Medical Service, with recommendations which eventually led to the reorganization of that Department. In 1858 she published her famous "Notes on Nursing," the familiar handbook of the professional nurse to this day. She was freely consulted by the Authorities in all succeeding wars: her influence was great in the American Civil War of 1861 and in the Franco-German War of 1870-1; while the Geneva Conference might have been delayed many years and even centuries longer if it had not been for the lessons taught by her work. For she had well indicated how voluntary civilian effort is required and is able to supplement a Government Service, whose



Photo London Stereoscopic Company, Ltd.

FLORENCE NIGHTINGALE.

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inevitable inelasticity renders it unable to cope with the sudden great demands of a big war; while the cost in time of peace of maintaining such an organization as would be equal to all eventualities would be prohibitive.

Thus we see in the Crimea that, though the French Sanitary Service was already well organized and efficient, working under able and experienced Directors, it came to grief; and in spite of its initial triumphs, the English was to prove in the long run far more efficient and successful. The health of the English camps materially improved during the war, and eventually excelled that of the French.

In the ten weeks from May 5th to July 14th, 1855, ninety-six per cent. of the deaths were due to zymotic diseases, not wounds: which means that though few of these deaths could have been saved by the medical knowledge and appliances at their service, the whole ninety-six per cent. of the sickness could have been prevented by adequate sanitary precautions and judicious feeding. The mortality from sickness and wounds was sixty per cent. for the first six months of the war, for the whole Army; it was only eleven and a half per cent. for the last six months. Much of the credit for this is due to Florence Nightingale, but much also to Lord Raglan and the Sanitary Commission instituted by him, whose recommendations were faithfully

followed. Dr. Scrive declared the immunity that the British Army gradually achieved from typhus, cholera, and scurvy, which continued to ravage the French lines to the end of the war, was due to the precautions taken to spare the soldiers unnecessary fatigue and to ensure their comfort and contentment in camp. The contrast between French and English was later drawn in poignant words by the French Medical Commissioner, Dr. Baudens. "The English wash their clothes in hot water and change twice a week," said he. "The English Ambulances are of a remarkable cleanliness: one has seen that this quality is not always recognizable in our own." He noted that our Barracks were well ventilated, lighted and warmed, and that there were reading-rooms, books and papers, and games for convalescents. In March, 1856, he reported the French to be short of every necessary, surgical or medical, of utensils and clothing, with blankets contaminated and sheets few, and no proper means of washing them. The invalids in the tents were getting frost-bitten; those shipped to Constantinople, Gallipoli, or France were without proper medical attention, dressings, or clothing *en route*; they suffered from cholera and dysentery, vermin and dirt.

The French Service was hampered by rules and formality: it suffered from the very care with which it had been previously organized. It lacked the elasticity which the English system had gained,

curiously enough, from its hopeless breakdown. Dr. Scrive protested with vigour against the want of assistants. In August, 1855, he demanded at least forty additional surgeons, since "eighty surgeons are not sufficient in the midst of a campaign to attend the wants of sixteen Ambulances, and this is the total staff at my disposal." Dr. Baudens agreed with him that it was quite impossible for the doctors to deal with their overwhelming accumulation of work. And in their hospitals, as in all the war hospitals of the century, there was a shortage of nurses and orderlies, with its usual distressing results. It involves neglect of the patients, dirt, and much extra work for the doctors and the young dressers they engage to assist them. The French "Soldats-panseurs," the bandagers or first-aiders, were only improvised among the convalescents. Bearer Companies were formed of army-pensioners, convalescents and the bandsmen. The fact that strength, and a technical skill only achieved by careful training, was needed for this work was not yet appreciated.

After the battle of Alma, the wounded remained two nights out on the battle-field, and only received medical attention when they reached the Hospital Ships. Imagine what a complication of the surgeon's work this interval involved! Imagine also the inadequate attention then given, when we have read the descriptions of these so-called Hospital Ships.

When we see Scrive, the French Surgeon, pointing admiringly to the well-organized and well-equipped Hospitals of the English Army and the sanitary arrangements of its Camps, we may well feel pride that the Nation so satisfactorily coped with the state of things which blotted her fair fame at the beginning of this war. But with our growing efficiency, our ideals have grown wider since then, and it is doubtful if we should now consider any Ambulance arrangements satisfactory, or even passable, in which two important branches, transport and nursing, were in such an incomplete state.

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The administration of the French Medical Service was so centralized and encased in unbendable regulations that there was little room for voluntary effort. But there are a few points which should be noted here.

The Protestant Church in France sent a body of ten "Aumôniers," faithful and zealous workers, to bring religious consolation to the sick and dying. Though their work was principally religious, they distributed the gifts entrusted to them by the charitable at home. Their work is notable as being as definite a link in the chain of Voluntary Aid as was the work of Florence Nightingale. There were no Protestant Chaplains with the Army, so the Aumôniers paid all their own expenses

and arranged for their own housing and travelling. They principally laboured in the big hospitals of the Bosphorus and in the camp before Sebastopol. Two of them laid down their lives at their posts, victims of typhus.

The Russian Army suffered in just the same directions as the French and English. There the lack of surgeons was even more conspicuous; many of these were foreign volunteers. Transport and hospital arrangements were all hopelessly inadequate. Dr. Evans, the American, visiting the hospitals of Moscow and the northern provinces after the conclusion of peace, says that he was greatly saddened by there seeing "the impossibility of then remedying the evils occasioned by primary neglect." The distances in Russia are so great that the difficulties in the way of a general unity of organization were accentuated, especially in the domain of voluntary aid, which was called for by the inefficiency of the embryo State Medical Service. The Grand Duchess Helena Pavlovna organized a semi-religious Order of "*Sœurs de l'Exaltation de la Croix*," who devoted themselves to the work of nursing sick and wounded soldiers; more than two hundred members of this pious community worked as nurses with the Russian Army. They were under the direction of an Almoner and six surgeons, and provided their own funds and stores. It is sad to record that many of them perished of disease and overwork, which indicates

the state of the Hospital service with the Russian Army.

Prince Demidoff established another excellent agency for the relief of the Russian prisoners in English and French prisons, whose work was afterwards extended to the aid of foreign prisoners in Russia.

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The British Ambulance Transport Service in the Crimea was a failure. Serious complaint had been made of this branch of the service after the Peninsular War by the three great military surgeons, Sir J. McGrigor, Hennen and Millingen. The latter published a very complete scheme for its organization on much the same lines as the German service of to-day, but nothing was done. The British troops left Portugal, peace settled down upon the country and economy laid its chill hand upon the Army Medical Department. When the Crimean war broke out they tried two sorts of bearer for the collecting of the wounded from the battle-field, with equally unsatisfactory results. The first ambulance corps was composed of military pensioners, old or of poor physique, ignorant, careless, and altogether unsuitable to the work. The second ambulance corps was composed of civilians: volunteering for the work for the sake of the good pay, they did not like it when they had it, and failed through being unused to hardships

and to military discipline. Several transport vehicles were tried, to improve upon the country carts and commissariat wagons in general use. Fortunately, the troops were for the most part stationary, and thus the problems of efficient transport were reduced in importance, but enough was seen to be wrong to draw public attention to this subject.

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I must now pass on from "The Lady with the Lamp," who so holds our reverent admiration that one would be tempted to linger over the moving tales of her work and self-devotion, to another war and another hero of the work of mercy.

The name that may be considered most worthy to stand beside that of Florence Nightingale is Henri Dunant. As England is made proud by her daughter, so Switzerland may rejoice in her son. For modern Ambulance work is in great measure his invention.

Jean Henri Dunant was born in Geneva in 1828, of well-off parents, and received a good education. His interest in our subject was that of the benevolent amateur. The steps by which he reached the conclusions which were to influence the views of the whole civilized world were doubtless many and gradual, but the important and significant date in his history, as far as we are concerned, is

June 24th, 1859. Dunant happened to be travelling in Northern Italy at that time, and the outbreak of war between the Austrians and the French allied with the Italians, found him (whether by intention or accident) in the neighbourhood of Solferino, where the greatest battle of the war was fought. Several causes contributed to the awful total of casualties in this collision.

The forces of Napoleon III. with those of Victor Emmanuel II., King of Sardinia, numbered one hundred and fifty thousand men with four hundred guns. The Austrians, under the young Emperor Francis Joseph, numbered two hundred and fifty thousand, in nine Army Corps, of which a force of one hundred and seventy thousand with five hundred guns was engaged at Solferino. The armies faced each other practically unfed, and unrested, and so their exhaustion at the end of this sanguinary struggle of fifteen hours' duration was the more acute. The actual meeting of the armies at dawn of the 24th June was rather unexpected. The Austrians occupied the fortified heights which they had reached by a forced march during the night, expecting at least a day's rest before the battle, but found they had to support the fierce attack through the whole of that sultry day, practically without food, the only thing which they had in plenty being brandy. The French troops had crossed the Chiese river during the night, expecting to have time to rest and cook

breakfast, when the growing daylight discovered them to be right under the artillery fire of the Austrian position. Three hundred thousand men faced each other at the commencement of the battle, on a front ten miles long, which extended as the fight progressed.

Dunant has described for us this most sanguinary encounter of modern times : no quarter was given, the wounded defended themselves to the last as they lay thick upon the fields and in the ditches. "It was a butchery by madmen, drunk with blood." Then came the cavalry, galloping madly over fields piled with the dead and dying, trampling down the feebly-groping wounded men ; then came artillery driven at full speed, to mangle the survivors. "The field is covered by human fragments, the earth is soaked with blood." The weather had been hot and dry, the wind got up and carried clouds of dust over the parched and exhausted fighters, choking the weakly-panting wounded, darkening the sun. The wind grew furious, the day turned suddenly chill and stormy—a terrific rain descended, a veritable cloud-burst. It was the last stroke : human nature could support no more, the combatants drew off. The Austrian Army retreated, but the honours of heroism were equally divided. The roads were blocked with army wagons and transport vans ; the Austrians tried to carry away their own wounded, but the number of casualties was too great for them to cope with.

The evening shadows crept over the fields, Death stalked grim where the fruits of the earth should be springing to support life. Those unwounded who were not too exhausted, crept about, seeking comrades or officers, or trying to aid the suffering without any proper appliances. Above all rang the awful insistent cry of tortured men for "Water—water——" and there was *no water*. Thirst is the torment which reigned supreme on that stricken field—the terrible thirst of hæmorrhage, aggravated by heat and dust and exhaustion.

That is the description given by Henri Dunant, who studied this battle-field with the compassionate eyes of the non-combatant.

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During the battle, hastily-formed temporary hospitals, or more correctly named "collecting stations," were established in Churches, monasteries, farms, or in the open air under the shelter of woods: pennants were affixed to indicate these hospital stations, but there was no recognized sign or colour to denote their nature, and the wounded soldiers could not always find them, but the enemy's artillery fire did.

"Who would be able to paint the agonies of this horrible night!" cries Dunant. There was no proper organization for the collecting and care of the helpless wounded. Wagons of bread and stores and surgical dressings had come under

the enemy's fire and lay smashed and useless beside the roads, when their loss meant incalculable suffering, and delay meant death.

He noted, among other points, that the shock of the cylindrical ball shattered bones, so that recovery was rare from these wounds: that the conical balls caused terrible internal injuries: that the bursting of shells caused mutilation and very extensive wounds.

In the seriously injured he found a vacant look, as though long agony had benumbed the brain, and they did not understand what was said: in others a dangerous state of nervous shock, with convulsive shuddering: in others with undressed wounds aggravated by earth, lead and bits of clothing, a sort of frenzy of pain in which they begged to have their tortures ended by death.

The confusion of every service was without parallel. When the sun rose on the morrow, the burning sun of an Italian June, the need of water became greater and greater. The ditches dried up, and armed guards had to be stationed by every little stream or spring. Dunant went to Castiglione and there raised a Corps of Volunteers to help in the search for the living among the dead out on the fields. For three days and three nights this work went on, and the wholesale burying of the dead. A great effort was made by the French army, soldiers being detailed from each Company to recognize their own dead, and collect

all the valuables and mementoes on their bodies to send to the relatives; then, with the aid of peasants, burial took place in large common graves.

The wounded were chiefly transported to Castiglione, and from there drafted to the Hospitals in Brescia, Cremona, Bergamo and Milan. Thus Castiglione became one vast Clearing Hospital, where the overcrowding and confusion were appalling, and it was found impossible to treat, feed and get the patients away as quickly as they arrived. Every private house became a hospital, where the owners often could not get doctors to visit their wounded guests, nor, later, burial parties to carry them away. There was plenty of food and drink, bandages and dressings, but insufficient hands to administer them.

Dunant saw that "a voluntary service, good or bad, *must* be organized." By Sunday morning he had collected a certain number of peasant women to give food and drink to those who were dying of hunger, thirst and dirt, rather than their actual injuries. He took over the management of the Chiesa Maggiore; he sent boys to fetch water and set women to distribute it; then distributed a ration of soup made by the Commissary Department; then got some washing and cleaning done. There was plenty of lint for bandages and dressings, but no shirts or change of clothing for the patients, who lay in what they had fought in four

or five days ago. These peasant women did useful work at the wash-tub. And gradually Dunant collected a varied band of volunteers round him : his coachman, an old naval officer, some English tourists, an Italian priest, a Paris journalist, and some French officers, who followed with loyal devotion the lead of "The Gentleman in White," as he was called. At Dunant's repeated and urgent request, the French Commissary allowed some strong prisoners and three or four Austrian Doctors to be pressed into the service of the wounded, as they willingly were.

And he speaks with enthusiasm of the splendid work of the women who assisted him. He adds : "The feeling one has of one's own insufficiency in such solemn circumstances is an inexpressible suffering."

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After this first horrible congestion, the Medical Service did excellent work in many directions. In Brescia fifteen thousand beds, more or less permanent, were improvised in forty-eight hours. "The inhabitants have done more than was ever done before in similar circumstances." In forty buildings, Churches, schools, etc., twenty thousand wounded were housed. People of every class were eager to help their French deliverers, and the Municipality took this task seriously and enlisted the aid of the best men of the city. Some

one hundred and forty civilian doctors flung themselves whole-heartedly into the work, while Aid Committees were started to receive and distribute donations and manage depôts of stores.

Yet still in many centres there was an insufficiency of doctors, and especially of trained workers and nurses. That was no time for training them, and harm was often done to patients by injudicious feeding, unskilful moving, and unavoidable lack of cleanliness and watchfulness. There was need of discipline and control of these helpers, who being but volunteers were often resentful of any criticism. "How valuable in the cities of Lombardy would have been some hundreds of volunteer nurses, devoted, experienced, and, above all, previously *instructed*. They would have rallied round them the meagre bands of assistants and all the scattered forces of help." (Dunant.)

The official figures of the losses in this decisive battle are: Killed and wounded on the field, June 24th, in both armies, 3 Field-m Marshals, 9 Generals, 1,566 Officers (630 Austrian and 936 Allies), with about 40,000 rank and file.

On the side of the Allies there were in the hospitals of Brescia, and other places, from June 15th to August 31st, 19,665 cases of sickness. Of the Austrians, at least 20,000 sick in Venice, besides 10,000 wounded in Verona.

The native population of Lombardy worked like heroes, since they regarded the French as their

deliverers from the hated yoke of the Austrian. But after the series of battles which led up to Solferino, the French Medical Service was paralysed by the vast numbers of sick and wounded on its hands with which it was incompetent to deal. Poplimont, reporting on the situation the day after Solferino, stated that the wounded at Montechiari had not yet been attended to, nor received any nourishment since the night before the battle. "If often happens so even in the best organized armies," said he. He recorded further that at Castiglione the Austrian prisoners, the only able-bodied men, and as I said before pressed into the work of transport by the Medical Officer in command, did absolutely splendid work. The Italians repaid this with a philanthropic kindness to the Austrian wounded. In Milan, for instance, there was a large hospital set apart for wounded Austrians, which was staffed by Italian civilian doctors.

Of the Italian Medical Department, all the same complaints could be made, and were made by Dr. Palasciano. He declared that the scarcity of surgeons was a scandal, and that the severely wounded were callously abandoned to die on the field, when he knew several distinguished civil surgeons who had offered their services, which had been declined by the Sardinian Government as opposed to Army Regulations.

The civilian work in the hospitals, though not

on the field, was the notable feature of this campaign. At Milan alone there were two hundred and eighty Italian civilian doctors at work in the military hospitals, where on July 1st there were seven thousand wounded, housed in fifteen hospitals, most of which had not been in existence a fortnight.

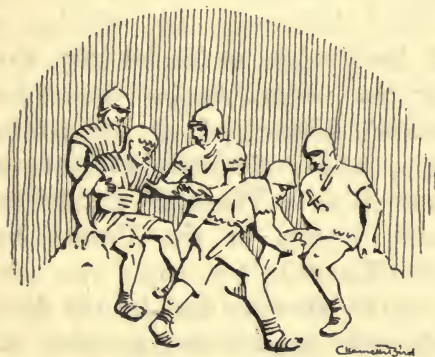
At Brescia thirty-nine hospitals were organized and equipped in a few days, where seventeen thousand French, fifteen thousand Sardinians and fifteen hundred Austrians were treated in the five and a half months of the war. Much of the expense incurred by the Municipality and the citizens was afterwards repaid by the French and Sardinian Governments.

There was a great deal of patriotic effort made in Austria at the same time: the Vienna "Patriotischer Hilfsverein während der Kriegsdauer," collected large sums of money and stores for Hospitals. Many branch committees were formed to collect and administer these funds, which were used for the relief of wounded soldiers and their families. This League was dissolved at the termination of the war.

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I must now leave Henri Dunant, whose subsequent history is so important to my story, to consider and digest the whole aspect of the tremendous struggle in which he had borne his

modest, useful part, while I turn to the development of the new principle of supplementary Civilian work for the wounded, as shown by the Sanitary Commission in the American Civil War of two years later.



ROMAN ARMY SURGEONS ATTENDING THE WOUNDED.

Column of Trajan. Bas relief.

CHAPTER X

1861-1864 A.D

The American Civil War—"The Sanitary Commission"—The Nation's Challenge—The Women of the South—The War in Schleswig-Holstein.

"**T**HE Institution of a Sanitary Commission in the United States marks a new era in the world's history. It is the greatest act of philanthropy which humanity has ever meditated and accomplished. Through its influence the whole social system of the United States was modified." (Evans.)

These words were written by the distinguished doctor who had studied the question of medical aid on the battle-fields of the Crimea and Italy, and during the great war between North and South in America. If this estimate of the importance of the voluntary movement could be made then, it has been more than ratified since, when the principles on which the Sanitary Commission worked, self-evolved as they were, have been subscribed to by all the civilized powers of

the world, first when they set their hands to the Geneva Convention of 1864, and again in 1906, when they signed it in the amended form which included the great Voluntary Aid Societies.

It is, from our point of view, the English Women who are the heroines of the Crimean War, and it is the American Women who are the heroines of their great Civil War. No doubt the Crimean stories had been read in America, and the transformation worked there by Florence Nightingale and her band of volunteers had been duly discussed and appraised by American womanhood. It is not unlikely that they had heard of the Frauenverein of Frankfurt, and even of Henri Dunant and his labours after Solferino. The awful battle-scenes that had disfigured Europe for the last fifty years had left their mark; they were signposts to point the way for these clear-sighted American women.

When the war between North and South broke out, with all the horrors and bitterness attendant upon Civil war, and the women of the North saw their menfolk being drawn into the net of the hastily organized and equipped citizen armies that marched South in defence of the deeply-cherished Union, they saw that there was work for them to do. On April 20th, 1861, immediately after the attack on Fort Sumter, some ladies of New York met together at the "Ladies' Dispensary," and asked each other what they could

do. There was a Government Sanitary Service, as sketchy as most of the other untried Army Departments at that time. The ladies were aware, by those confidential means they well know how to use, that the Government Service was in a state of commotion and disorder which boded ill for the wounded men who should fall to its care. They knew it to be under-staffed, insufficiently equipped, crippled for lack of money; and they knew it to be touchy, resentful alike of criticism and of offers of aid. They faced each other on that April day, with their hearts tender for the men and boys marching so cheerily southward, and the darkly creeping fears for the awful days that they foresaw to come locked behind brave lips, and asked each other *what* they could do! Money—yes: easily collected; stores, also. But to ensure that these did not rot on Government wharves while the boys perished for want of them! That was their task. And to select the right, strong, trained and experienced nurses, and get them to the spot before, not long after, the disaster!

No task was too difficult for these Ladies of New York—they embarked upon it with the gaiety of a great courage, and the knowledge that their work was needed. The American woman has always been both courageous and practical. And we may remember that this was no professional army apart from the people as a whole: this was a citizen army, drawn from every State, from

every home, from every class. It made a great difference, as I have pointed out before.

“The Ladies’ Central Association for Medical Relief” was formed that day. Its aims were clearly set forth: it was “To ascertain the wants of the Army. To establish relations with the Government Sanitary Service. To place itself in correspondence with local associations. To examine and register male and female Nurses, and procure Assistant Nurses for the Army.”

It first addressed itself to Dr. Finley, one of the Principal Medical Officers of the Army, with an inquiry as to the functions of a regular Medical Corps, and the suggestion that they might give auxiliary aid. He snubbed them off-hand, declaring the Government Service to be equal to doing all that would be required of it and their association to be superfluous. He ungraciously gave them permission to send any money or stores they might collect to his Department for distribution.

They were not satisfied, but not surprised, by this rebuff. They then personally approached the Secretary for War and the Chief Medical Representative on the Government Staff. They got nearer to the centre of things here and found that the greatest confusion existed. Everything at the official headquarters of the service was so very wrong that the prospects of its efficiency in the field were extremely poor.

The ladies therefore turned their backs upon it, and established for themselves an unofficial "Sanitary Commission" at Washington, and wrung out of the Government moral powers to visit and inspect the different camps and report upon their conditions and requirements. How large a thing this was to become, how vital then, and in the future, the principle advanced that the Nation at large is concerned with the health and care of its soldiers, and responsibility is to the Nation and not to a mere Government Department, was only seen by these clear-eyed American women. The Government that carelessly gave them moral powers of inquiry thought that little more would be heard of them. It was wrong.

The ladies saw that this was the time and place to give way to Men. Having paved the way, they then enlisted the services of twenty-one gentlemen, all well known either in a military, medical, or administrative capacity, and these formed a new Committee on June 13th. It was acknowledged by the Government, under the title of "The Sanitary Commission of Enquiry and Advice on the Hygienic Interests of the Troops of the United States."

And in the official sanction was implied permission to supply all the deficiencies revealed, and supplement the state service wherever necessary. Since the whole Army, with its Leaders, Organization, Commissariat and Transport, had had to be

hastily raised, armed, equipped, and arranged, with scarcely any time for preparation or discussion, it was no wonder that the Sanitary Service had been neglected and overlooked. The Commissioners compiled a list of deficiencies which shocked and horrified the whole nation.

The ladies, having sent out their Commissioners, had then set to work themselves. They made it their business to supply the wants their agents discovered. They undertook that everyone should hear what was wanted, and should do their own part to supply it. They also undertook to organize the distribution of the goods and money supplied by the sympathetic public. A multitude of local associations was started in every town and village of the Northern States, and eventually numbered no less than thirty-two thousand. Four thousand newspapers and journals advertised the work, and the more urgent needs were thus made public. Everyone set to work to make bandages, dressings and clothing. Immense gifts of food and goods were made. Huge fairs were organized; money poured in. The Central Committee kept its hands on the entire organization. It had an efficient service of distribution, its own private transport, and its depôts for gifts in kind all over the country. It appointed twenty medical men as Sanitary Inspectors, an office requiring great tact, but of infinite importance to the work of the Commission. In its Statistical Department the

reports of all the delegates were received and dissected and their conclusions made public. They printed practical medical pamphlets and distributed them to the surgeons with the Army: "On Amputations"; "On the Nature and Treatment of Yellow Fever"; "On the Treatment of Fractures" from a military-surgical point of view; "Of Infectious Diseases in Camps, and Hospitals, and during Transport," etc., etc.

By advice and gifts of money and equipment, the Commission assisted the construction of suitable military hospitals. During the four years of the war it sent no fewer than two thousand men and two hundred women to work with the Army in the field, either as nurses or in some administrative capacity. It arranged food and rest stations for the soldiers on the march. It had a fleet of nine ships, fitted as floating hospitals, or for the transport of goods: nine hundred typhus cases were nursed by women on board these ships.

It gave attention to the fitting up of Ambulance wagons and the perfecting of new designs: a new kind of suspended cot was used on board its ships which could be converted into a litter at need.

Its work on the battle-field was universally appreciated: the Army Doctors were delighted with its efficient service of supply. "Thank God, here comes the Sanitary Commission. Now we shall be able to do something," was the cry of the Army Surgeon.

After the battle of Antietam, 1862, when there were more than twelve thousand wounded to deal with, the Army authorities had not one-tenth of the medical supplies or workers necessary to cope with this huge number. But the Sanitary Commission's "Relief System" had foreseen the need, and had arranged for a special train to come through each day, with fresh stores of dressings, bandages, drugs, chloroform and instruments, besides sending an auxiliary corps of experienced men and women to work in the hospitals and at the rest stations along the Lines of Communication.

The care of the convalescent soldiers, and the assistance of returned prisoners and those granted furlough with personal necessities and money for fares, was also undertaken. And the decent and reverent burial of the dead.

A sister society, "The Christian Commission," worked hand-in-hand with the Sanitary Commission, and did equally good work, though of a more spiritual than material kind; bringing comfort and encouragement to the troops in the field, who grew unutterably weary of the prolonged struggle.

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The work of the women of the South was no less heroic than that of their Northern kinswomen.

They placed themselves at the head of every society which was directed to relieve the wounded, nurse the sick, or provide comforts for the troops. But the work was not arranged with the same system as in the North, its direction was not centred in one body; therefore the history of their efforts is not so important a link in the development of the work as a whole. The Northern "Sanitary Commission" was a challenge from the Nation to the Government, first sounded by the women, though the men afterwards took a conspicuous part in the work. It was the first plain and unmistakable assertion of the Nation's right to claim for its soldier-sons the best of care, and to interfere to secure it for them.

The State Service has got to be equal to the occasion, or it will in future have to show reason why it should not be superseded. This was what America said, and what the world has echoed. Red tape is no longer permitted to be wound round the neck of the wounded soldier. The Medical Service may not be strangled by it. Absolute efficiency may be demanded by a Nation ready and willing to make uncalculated sacrifice to secure it.

Henceforward we see the Voluntary Worker taking his hand in the game in which it had been clearly demonstrated that there was a place for him.

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The next battle-field on which we see him is in Schleswig-Holstein, in February, 1864, where the two great States at war, Prussia and Austria, should have had no need for him, seeing how well their State Medical Services had been nurtured. But the Prussian Authorities cordially welcomed offers of assistance, which was principally given in the form of money or clothing. The troops experienced very hard weather in Denmark and were insufficiently clad to withstand it, many being without socks or underclothes. The money publicly subscribed was spent on warm clothing for the combatants and comforts for the sick in hospital. A Central Committee in Berlin managed the distribution of the gifts, while Provincial Committees did the collecting. On their behalf Professor Guret went to the seat of war to collect information as to the needs of the medical service, while Colonel Malakowski was in charge of the distribution of the supplies sent up. The public response to their appeal was so generous that more stores were sent than could be allocated, and after the war these had to be otherwise disposed of, when the Committees were dissolved.

One of the Provincial Committees, that of Hamburg, was created the very day after war was declared. This worked in agreement with the Knights of the Order of St. John of Jerusalem, who sent delegates to Schleswig, under Count zu Stolberg Wernigerode, to establish hospitals

for the sick and wounded and to arrange a big depôt for stores.

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Another little link in the long chain of Ambulance development was forged by Dr. Wickern, the veteran founder of the "Rauhe Haus," near Hamburg. Into his great philanthropic reformatory establishment for boys and girls, he received a certain number of young men of good character to be trained for rescue work, as prison attendants, or schoolmasters, and he offered the Authorities six of these young men to act as hospital orderlies, or as stretcher-bearers on the battlefield.

In Vienna much the same work was done by the "Hilfsverein," resuscitated, which had done such good service in the Italian Campaign of 1859.

Likewise in Denmark, a Central Committee was started in Copenhagen, whose object was not only to collect medical stores for the wounded, but to care for the convalescents and the families of the slain.

Thus we see Europe and America full of local committees whenever war broke out, with interest aroused, waiting as it were for the word that should direct their energies into the most useful channel.

CHAPTER XI

1863-1864 A.D

“Un Souvenir de Solferino.”—The Committee of Public Usefulness—The Conference of October, 1863—Argument and Answer—The Signing of the Geneva Convention—The National Societies—Henri Dunant again.

WE have seen that the fateful moment had arrived: that the world was ready and waiting for a new and concerted movement. America had solved her problem by boldly invading the battle-field with her civilian aid. Europe was full of local committees which collected money and stores to supplement the State Services from a respectful distance. The whole treatment of the wounded was receiving attention, which attention revealed the inherent weakness of a system which permitted the personnel and stores intended for their relief to be diverted to any other purpose by any power strong enough to seize them. So long as the Doctor could be taken prisoner at the side of the wounded man he was tending—so long as medical stores could be seized and hospitals

bombarded—there was a drag upon the wheel of progress. The evolution of the Army Medical Service had reached a point whence it could crawl no further: a leap was now required of it. It was the voice of Henri Dunant who called to it to take that leap.

We left him after the battle of Solferino digesting the moral of what he had seen there. So deep had been the impression made upon him that, like Florence Nightingale, he almost involuntarily dedicated his life to the service of the wounded man. That pitiful cry for “Water!” on the stricken fields of Solferino was sent ringing across the world by this most eloquent champion. The story of the Austrian doctors languishing in captive idleness when hundreds were dying for want of surgical help, was made the text of the most pointed sermons to which the ears of men have ever hearkened.

In a small and modest pamphlet entitled, “*Un Souvenir de Solferino*,” Henri Dunant told the story of that battle, not from the point of view of the victorious general, nor from that of the historian or political specialist. He had seen the wounded men of both sides on the battle-field and after, and he wrote of what he had seen with a poignant simplicity. He did more: he asked why some more humane and reasonable system could not be adopted, and he sketched out a scheme of which the essential ideas were: (a)

an international agreement as to the neutrality of the medical staffs; (b) an organized band of voluntary bearers and nurses.

Dunant was a man of energy who believed in his own scheme. He approached Marshal MacMahon, who received his suggestions with some favour, and Napoleon III., who was in such cordial agreement with his ideas that he immediately ordered the French Army to discontinue the practice of making Doctors and nurses prisoners of war. But something more than this was needed.

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Among the crop of small societies of philanthropic purpose which had sprung up all over Europe during the nineteenth century was one whose fate it has been to reap undying fame through its hospitality to the great humane idea evolved by Henri Dunant. This was the "Société Gènevoise d'utilité publique," a kind of Municipal Commission of sober, earnest citizens of Geneva, appointed to further and direct the philanthropic works of the city. Only three months after the publication of "Un Souvenir de Solferino," at a Meeting held on February 9th, 1863, which appeared to its members in no way more important or remarkable than any other, they seriously discussed the book written by their young fellow-citizen, and its proposal "to form during a time of peace and tranquillity, Relief Societies, whose

aim should be to help the wounded in time of War, by means of volunteers, zealous, devoted, and well qualified for such a work."

Remembering the experiences of Zurich in the Sonderbund War, in which such a band of volunteers had done great things, with some knowledge also of the splendid work of America's Sanitary Commission, the Society looked favourably upon the proposal and its advocate.

A small special Committee was appointed to consider this scheme for mitigating the horrors of war. The President of the "*Société d'utilité publique*," M. Moynier, became President of the sub-committee, and round the table sat Henri Dunant, Dr. Appia, Dr. Maunoir, and General Dufour, Commander-in-Chief of the Swiss Army.

From this moment, the parent Society of Public Usefulness retires into the background as far as we are concerned, and it is on this modest committee of five men that our eyes are fixed. They started on their great adventure with but scanty knowledge of the real need for their interference with time-honoured precedent, but they were not without qualifications for their task, since Dufour understood the military aspects of a battle-field, Dr. Appia had treated the wounded there, while Dunant had organized voluntary help in the Italian campaign.

The more they discussed the needs of the wounded man, the more helpless these five unknown

Swiss burghers felt themselves to do anything effective to aid him, so long as the Great Ruling Powers of the world continued to drive the chariot wheels of their Armies across his tortured form. They did not know whether the military authorities would ever agree to neutralize the wounded and the doctors, or whether they would decline to consider any suggestion of a civilian organization. But they worked quietly on, publishing further editions of Dunant's "Souvenir de Solferino" and studying the histories of the more recent wars and the writings of Doctors who had treated the wounded therein, that they might have argument and evidence to back their own opinion. There was by no means such a plentiful crop of literary evidence available then as has since sprung up, when after every war its "Surgical History" is written, but they soon marshalled a notable array of facts to support their contention that all was not as well with the wounded man as it should be. Dunant had already opened a correspondence with several European Sovereigns and Ministers, urging on them his proposition to neutralize the Army Medical Services. And in September, 1863, the Committee issued a circular, appealing to the European Governments to send delegates to an International Conference at Geneva, for they felt that to be in any way effective this work must of necessity be international and universal.

On October 26th, 1863, the Conference took

place in the rooms of the Athenæum, Geneva. There were present eighteen official delegates, representing fourteen Governments, six delegates of different philanthropic Societies, including the Order of St. John of Jerusalem, the five original members of the Geneva Committee, and seven unaccredited visitors, interested in the subject—thirty-six in all. And these thirty-six men were no visionaries, collected to talk about a philanthropic millennium ; they were all men distinguished, in a practical world, for military or medical knowledge.

They elected M. Moynier, of Geneva, to be the President of the Conference, while the Vice-President was Prince Henry XIII. of Reuss, the delegate of the Order of St. John.

And for four days they dealt with the serious problem before them, to reconcile War with Charity. They had to devise a scheme whereby public fervour might be put to the best use, leaving it so far free that its ardour was not damped by too irksome restrictions, while it was placed under military discipline in order to help, not hinder, the Army for whose aid it had been aroused. They had to create and establish a working link between the military and civil elements in war-time.

The Geneva Committee had drawn up a Provisional Scheme which it offered to the Conference as a basis for its deliberations : upon this, certain notable Resolutions were passed. The verdict of the Conference is well summed up by M. Frégier :

“At every period, and amongst all Nations, from Cyrus down to Napoleon III., the Personnel and Matériel of the Army Medical Departments, or the Corps analogous to these, charged with the care and transport of the victims of war, *have been insufficient*. This is an undisputable and incontestable fact, written on every page of the world’s military annals.”

Therefore the Conference largely devoted itself to the subject of Voluntary Aid, on which very definite views now emerged from the obscurity in which the whole matter had hitherto been wrapped. It was laid down that the fundamental principles on which they were to work, such as the neutrality of medical personnel and stores, must be common to all nations and be subscribed to by their Governments and Military Commanders. That a distinctive badge and flag for the medical services must be universally employed, which could be immediately recognized by a man of any nationality or race. But it was also laid down that the Voluntary Societies and Committees in each country which undertook the direction of the work there must be left absolutely free to devise their own schemes of organization and evolve their own rules, merely submitting themselves to the Governments of their own countries.

Another definite point established was the plain duty to give all possible assistance to the Enemy’s wounded when the fortune of war left them in

the power of a victorious army. To do as you would be done by was in all matters seen to be the necessary rule, if international arrangements for mutual benefit and assistance were to be successfully formulated. This was a new idea in War, which had been ruled rather by the spirit of paying off old scores.

Many an old and deep-rooted idea, and many a one newly sprung up, was ventilated during those four vital days of discussion, of argument and appeal. One hears the military and medical Representatives of the Governments put forward various objections to the presence of any large number of neutral volunteers upon a battle-field; urging that lay auxiliaries, ardent but undisciplined, would hamper and impede those in command of the fighting forces. And the answer ring clear, that a good Leader will be thankful for a civilian organization to which to leave both his own and the Enemy's wounded, as he departs to pursue his advantage with all the fighting men at his disposal, instead of having to choose between abandoning them, or rendering his victory indecisive and therefore the more costly.

Another argument put forward was that the acceptance of outside help would be an admission of weakness, and would shake the soldier's respect for and confidence in his military chiefs, whom he should trust to carry out all measures necessary for his preservation.

To this the very pertinent answer was returned that the soldier's confidence in the arrangements for his relief when wounded was already so small as to be a negligible quantity, and that it was the object of the proposed organization to obviate the dire results of the neglect by which his wounds had hitherto been complicated. Confidence in the completeness of the means for his rescue and relief when injured, by whomsoever supplied, would tend to redouble his courage and raise his spirits; and the *morale* of the troops was acknowledged to be one of the important factors of victory.

Again and again one hears that old argument bandied about, that to lessen the horrors of war is to encourage its frequency. But the Conference, to its honour, decided that a general knowledge of those horrors, which it was now to the interest of Rulers to conceal, would be spread by the Relief Committees among the people of all nations, which would tend to discourage war more than all the arguments of sentiment or economy. Even Napoleon, who cannot be accused of unduly favouring Peace, on the battle-field of Eylau exclaimed, that such a spectacle was well fitted to inspire Princes with a love of Peace!

At last certain Resolutions were passed, embodying the views of the Conference as to the form the proposed organizations of relief should take, and a copy of these was forwarded to each of the

Governments of Europe. A permanent "International Committee" was then elected, to which the work of publishing the views of the Conference in all countries was entrusted. Of this Committee, M. Moynier was President, and his four friends were members.

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During the next few months "National Aid Societies" were busy organizing themselves in most European countries. Great Britain was an exception, but Great Britain was at peace, and the societies primarily appealed to patriotism to rally to the aid of their national armies; thus they were most successful when working under war clouds.

From February to May, 1864, Prussia and Austria were wrestling upon the battle-fields of Schleswig-Holstein. During this war a meeting was convened of the Principal Medical Officers of the Prussian forces, when the Resolutions of the Geneva Conference of the previous autumn were read and discussed. But such grave objections were raised by the military authorities that the recommendations of the Conference were set aside as impracticable. "The independent movement of philanthropic activity was declared difficult, and even impracticable, in the centre of a vast military mechanism." Voluntary effort had not

yet been given a recognized place in subordination to the military authorities.

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On August 8th, 1864, a Diplomatic Conference was again convoked at Geneva by Switzerland, when official delegates of nine of the Great Powers signed THE GENEVA CONVENTION, the great Charter of the wounded man, which will endure for so long as the Earth shall last, unless and until all the civilizations of the world shall disappear and the States revert to savagery.

On August 22nd, France, Switzerland, Belgium, the Low Countries, Italy, Spain, Baden, Prussia, and Denmark set their hands to it. In December, Sweden and Norway added their signatures; in January, 1865, Greece came in; and on February 18th, Great Britain's seal was appended. All the other European States gradually followed suit, till by 1868 there were twenty-two signatories.

It was a short and simple document of ten articles, and it will be noted that no definite mention is made in it of the National Societies, nor of any voluntary workers. They had each to find their own niche in the Army Medical Service of their own country. (For the full text of the Convention see Appendix.)

Article I. declared that Ambulances and Hospitals must be recognized as neutral and respected therefore, which neutrality must cease if they were

guarded by the military (a restriction afterwards removed).

Article II., that the Personnel of Hospitals and Ambulances must be respected as neutral while engaged in treating the sick or wounded.

Article III., that these, in the event of the occupation of the place by the enemy, must continue their medical work or retire to rejoin the corps they belonged to. They must in that case be given free passes to the outposts of their own troops. It was afterwards added: that the military commander should decide the moment of their leaving, and that the Powers are responsible for the good treatment of the above fallen into their hands.

Article IV., that the Stores of Military Hospitals are under Martial Law, and cannot be removed by the staff if they choose to retire; they can only take with them such things as are their own private property. Ambulances retain all their material intact, the word Ambulance here applying only to movable and temporary establishments that follow the troops.

Article V., that Natives of the country assisting the wounded are respected, and Commanders must inform the natives of this neutrality. The wounded cared for in a house serve it as safeguard; and their reception is taken in place of housing troops or paying war contributions. It was afterwards added that, in allocating the money for

these respective charges, due allowance should be made for the charitable zeal of the householder !

Article VI., that Sick and Wounded soldiers must receive impartial care, to whichever side they belong. Commanders have the right to return wounded enemies to their own friends during a fight, if circumstances permit and both parties consent.

Article VII., that a Distinctive Flag should mark every medical establishment, and an arm-band be worn by all the personnel of the Ambulance Service. The Red Cross on a white ground (the Swiss Flag reversed, in compliment to their hosts) was chosen by the Conference as the distinctive badge.

Article VIII., that all the details of the execution of the Articles of the Convention were to be regulated by the Commanders-in-Chief of the Armies, when Signatories to the Convention.

Articles IX. and X. merely dealt with the ratification of this Convention.

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In 1868 a Second Diplomatic Conference took place at Geneva, in which some of the Articles were added to, and at the Hague Conference of 1899 the whole Convention was extended to cover the requirements of Naval Warfare. No further additions were made until July, 1906, when the

thirty-five Powers then signatory to the Convention of 1864 again sent delegates to Geneva to discuss some amplifications of the original document made necessary by modern conditions. These do not constitute any real alteration of the original Convention, but they elucidate various points which had previously been obscure.

In these supplementary Articles the voluntary Ambulance Worker is definitely mentioned and his position is regularized. (See Appendix.)

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It is difficult for us who have lived so long in familiar companionship with the ideas embodied in this Charter of Mercy to realize their novelty at that date. The neutrality of the wounded was the very newest. Frederick the Great had been in advance of his day when he gave orders that the enemy's wounded should receive the same care and attention as his own. The proposition that the Voluntary Society should be prepared to give equal and impartial care to a wounded man of whatever nationality was astonishing in its broad humanity. It was safeguarded by the direction that no Society should offer its services to any but its own Government in time of war, and should only go elsewhere and assist other belligerents if specially requested to do so.

Another new and important declaration, though it embodied an older idea, was on the neutrality

of the doctors and medical stores. It is plainly to be seen now how just it is that these shall never be diverted from the service of the sick and wounded, into whosoever hands they may have fallen. But at that day this was not the custom, nor was it possible until the neutrality of the patients was established. For if the captured Doctor might refuse to attend the Captor's wounded, he was not very likely to be returned to work among his own ! And if a Commander could, and often did, permit medical transport and stores to be diverted from the use of his wounded to that of his fighting force, it was not surprising that the impulse of private generosity received a check. In many ways the marvel is, not that so little but that so much was accomplished under such impossible circumstances. Stories of an unselfish kindness that is well-nigh heroic, decorate the pages of our history. When one realizes the difficulties, one marvels to see the exhausted fighting men giving up the chance of a hardly-earned rest, or of glory in the fight, to search for and aid wounded comrades, or carry an officer out of further danger.

And it must be remembered that public morality had agreed from the beginning of time that the enemy's wounded and all the valuables upon them should be prize of war to the victorious and the strong. That soldiers should even leave the fighting ranks to wander over the field in search of loot was not unknown. And in those cases

where pay was in arrears, and cruelly uncertain, the prospect of enriching themselves was one of the strongest motives to impel men to adventure themselves in the theatre of war. And where did they get their chief source of profit but from the money, medals, arms and trifles upon the bodies of the dead or dying men among whom they found themselves? It was only occasionally that the sacking of a town was winked at, although Napoleon was not above thus filling the empty pockets of his soldiery with the goods of innocent townspeople, to save his own.

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The conveyance of the wounded to the spot where the Doctors could dress their wounds had been largely left to chance; and the equipping of the Hospitals had been a matter rather of what was possible than of what was suitable. By the Geneva Convention the wounded man was raised at once from a vexatious burden to a sacred charge. On the shoulders of the highest Military Authority, even on the Princes and Governors of the Nations, the responsibility was laid for his welfare. And this responsibility was spread out over the whole Nation, till no one of its humblest citizens could logically say that it was no concern of his. The principle of civilian aid to supplement military organization was firmly established by the

Conference, although not embodied in one of the Articles of the Convention, since to do so would be to render its acceptance obligatory on the signatories, and this they very naturally objected to at that date, when the Voluntary Societies were in a very embryo state. But the effect was the same, and the Nations set themselves cheerfully to the Work of Mercy.

National Societies were organized in every country, and the women took an active part in this work, and as volunteer nurses in the War Hospitals. When the scheme worked well, the "National Committee" drew into a friendly association various philanthropic agencies, and helpers from every class and every shade of ability and opinion. It was seen that each section should be free to specialize as it liked, and make its preparations in time of peace as it thought best, but that in war the National Central Committee must be the supreme authority and represent all minor organizations in the counsels of the Military and State Officials. The organization of the Order of St. John of Jerusalem was held up to these societies as a model, with its Central Council on which all the Branch Associations were represented, its "Commendator" attached to the Military Staff of an Army in the field, and its Knights and Serving Brothers at work among the wounded.

The American War was very fruitful in useful lessons. It was seen that the more decentralized

efforts of the South, where each State had its own Central Committee, and this again had numerous societies working for different though related objects under its jurisdiction, were inferior in accomplishment to those of the North, under its single Sanitary Commission. The statistics recently published by the Sanitary Commission were invaluable to the newly-formed or forming societies. Among other things, these showed that as the result of a circular, of which eighty thousand had been distributed at the beginning of the war, no fewer than thirty-two thousand Ladies' Committees had been instituted all over the States. This organization was seen to simplify the task of raising money, which always flows freely into the coffers when war breaks out or is threatening, but which in time of peace can be permitted to sink to a small nucleus fund composed of the subscriptions of members.

A work that the National Societies had also to tackle was the systematic study of their subject, that they might be able to give an authoritative pronouncement on the number of Doctors, Helpers, and medical stores needed per hundred wounded, in campaigns where circumstances of climate, country, and type of enemy varied the problems presented to the medical service. It was the lack of Helpers, both medical and lay, which had brought about the general realization of the need of the Geneva Convention,

so that the training and supply of these was an important branch of their work.

Very important also were the relations of these National Committees with the Military Authorities : this was not thoroughly understood till after the next great war, the Franco-German, had instructed the world in the use and abuse of Voluntary Aid on the battle-field.

Meanwhile, in 1866, M. Moynier and Dr. Appia, of the International Committee in Geneva, had published a work, "*La Guerre et La Charité*," embracing the past treatment of the wounded, the general agreement that the use of voluntary aid was the only solution of the problem, and the history of the events which led up to the signing of the Geneva Convention. This was written with unrivalled knowledge and quickly became the standard work upon the subject.

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There is one person whose history should be finished here. For four or five years Henri Dunant devoted his whole life to the work he had taken up : he wrote numerous pamphlets and articles, he corresponded with the authorities and with Ambulance workers in every country of Europe : he gave advice in the organization of National Societies : he spent all his fortune on furthering this great work—and then, with dramatic suddenness, he disappeared from the public view. How

it happened one cannot see, but the inherent modesty of this man led him to sink into the background when once he had seen his great idea taken up by the nations and firmly established as one of the unshakeable principles of modern warfare. At last, in 1897, he was discovered to be living in illness and great poverty in a Home for Old Men, in the village of Heiden, Switzerland; almost his only remaining means being a small pension allowed him by the Dowager Empress of Russia. The Baroness von Suttner then wrote a letter which was translated and published in the Newspaper Press of the world, appealing for funds to secure a pension for the man who had given life and fortune to help the world's soldiers.

Four years later the Nobel Peace Prize was awarded for the first time, and its two hundred and eight thousand francs were divided between Henri Dunant and Frederick Passy. Some objections were raised by Peace enthusiasts to its bestowal upon Dunant, who, as of old, feared that to lessen the horrors of war was to encourage not prevent it.

In October, 1910, Dunant passed away at Heiden, at the age of eighty-two.

CHAPTER XII

1870-1898 A.D

The Franco-German War—The formation of the National Aid Society—Volunteers on the Battle-field—The St. John Ambulance Association—First-Aid in Civil Life—British help in Foreign Wars—The Soudan in 1884.

THE necessity I labour under of surveying a subject so wide as to be almost without settled boundaries, which shows a continual tendency to slide over into the domain of "Medicine" on the one side, and into "Charity" on the other, and to be perpetually peeping over the hedge of "History," now brings me to a difficult pass in my travels. Some picture of the early growth of the National Societies which sprang up all over Europe under the ægis of the Geneva Committee, would seem to merit a place in these pages, and yet a detailed account of them would only be full of wearisome repetitions, and teach little of value except to organizers. The struggles, experiments, successes and failures of these societies are sometimes instructive, sometimes regrettable, sometimes paltry, sometimes fine. We see splendid

work side by side with wasteful extravagance, self-sacrifice and self-interest contending together, but the thing that has emerged from all this welter of good and bad is undoubtedly one of the finest concerted movements that has ever been evolved during the world's history.

Patriotism, Charity, and Science divide, or rather share without dividing, the honours of this work. The goal has not yet been reached, the finished article has not yet been produced in any country, no one scheme has been evolved and carried out in absolute perfection. Breakdowns are still frequent, waste is not unknown, but by serious study, by unselfish and infinitely patient work done quietly and without advertisement, difficulties are smoothed away, and the lessons of experience digested and brought to bear on modern problems. The work of the Red Cross Societies to-day is one of which any age might well be proud. From small beginnings many a National Society has grown into a great organization, linking in one chain of usefulness many independent but related philanthropic efforts. All classes of the community can find a niche in this comprehensive edifice, there is need for all and there is work for all. And over all these the International Committee has kept watch : offering prizes for books on such subjects as the Application of the Red Cross to Naval Warfare, or for Ambulance wagons and equipment. A quarterly "Bulletin "

was founded in 1869, in which all matters relating to the Red Cross and papers of interest have been published.

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Thus we see Europe gallantly responding to the appeal made to it by the members of the Geneva Conference, and the Governments and Military authorities ready to fit civilian and voluntary effort into a suitable place in their Army Medical Schemes.

Then came the next dramatic moment in the history of the movement. Six years after the signing of the Convention, the National Societies were seriously put to the test. On July 15th, 1870, War was declared by France on Germany.

This was a critical time for the National Societies.

Enormous numbers of troops were moved over large tracts of country during very short intervals. The Army Transport Service, both of France and Germany, was strained to the utmost. Large armies were flung forward, only to be rolled as hastily back again. The railway systems of the seventies would not stand it.

The first service to suffer from this congestion was the medical. The German Army Medical Corps was exceedingly well organized and equipped, its voluntary societies were in a well-defined position of subordination: its hospital

trains were ready to collect its wounded, its base hospitals all waiting with empty beds for their reception. Refreshment buffets were arranged at the large railway stations along the Lines of Communication, and were served by voluntary workers. All was well, except the man with a wound.

The Lines of Communication quickly became so congested and overstrained with troop trains that the Hospital trains had to lie in sidings for days, perhaps loaded with wounded; while the Base Hospitals were empty, the Field Hospitals were crowded to the roofs and the Collecting Stations became a hopeless jumble of cases which should have been dispersed to their several suitable destinations.

The French Army Medical Corps, being the more elastic, permitted far more interference from its own and foreign Red Cross Societies: and since it was found early in the war that the railways were overcrowded, they relied more upon horse-drawn transport for their Ambulances and their personnel. On French soil the spectacle is seen of an astonishing variety of small Ambulance parties, of every nationality, with or without official sanction, parading the theatre of war under the protection of the Red Cross, and succouring the wounded man wherever they found him in need. It is true that they seldom lacked material for the exercise of their benevolence, and that the wounded arrived at their doors in ever-increasing numbers. These independent parties, whose only

connecting link was the Red Cross under which they worked, did splendid service ; drawing money and stores and medical officers and stretcher-bearers from their own countries, and lavishing them upon the wounded to whichever side they might belong. But they did nothing to lessen the heart-breaking confusion which pervaded the whole service. Since France had become the theatre of war, her resources naturally felt the strain more severely than the German. But every description of the scenes witnessed by these devoted civilian Ambulance workers, adds to one's conviction that this was very far from the ideal set before the Red Cross workers of the world. A well-defined place under a competent and strongly-administered Army Medical Corps is what the civilian requires.

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A name that stands out conspicuously at this period is that of Sir John Furley. Himself a civilian, he stood, like Dunant, outside both the military and medical services, free of the prejudices and preoccupations which engross either, and was able to look on the question of military medical administration from an impartial standpoint. A Sub-Committee of Members of the Order of St. John of Jerusalem in England had been formed to try to establish a Society for aiding the wounded ; and John Furley was one of these

and represented the Committee at the International Conference held at Berlin in 1868. Together with Dr. Thomas Longmore (Professor of Military Surgery), the official delegate of Great Britain to the Conference, and Colonel Lloyd Lindsay (afterwards Lord Wantage), he constantly urged the formation of a British National Society. But since the incentive of War was lacking, the public failed to take up the scheme, though the Members of the Committee did much quiet work of value in formulating and discussing schemes of organization, so that the great moment found them not unprepared.

On July 15th, 1870, the gauntlet of war was flung across Europe, and the Franco-German declaration was made public.

On July 22nd, Colonel Lloyd Lindsay wrote to the *Times* inviting public co-operation in a scheme for sending out nurses and medical comforts to the theatre of war, himself starting the fund with one thousand pounds. This rang through the British Isles like a trumpet call: "the easy impulse of benevolence" was tickled by the picturesque nature of the call, and gave liberally of its superfluous cash, and an army of more serious workers and thinkers sprang to the task of directing the proffered aid into the most useful channels.

The British National Society was born, with Queen Victoria for its patron; and the Central

and Provincial Ladies' Committees were the veins through which its golden life-blood flowed. A quarter of a million sterling was quickly collected, and a huge quantity of stores and gifts of all kinds poured into its store cupboards.

The first General Meeting of the Society took place at Willis's Rooms on August 4th, when John Furley was deputed to go at once to the Continent to devise the best schemes for conveying the available help to the places where it would be of greatest service.

He has well described the scenes of activity which reigned at the Headquarters of each of the National Red Cross Societies. The French had its residence at the Palais de l'Industrie, Champs-Élysées. In one part of the vast building ladies were arranging medical stores and the gifts that came pouring in; sorting them into parcels and labelling them. In another, men were packing wooden cases marked with the Red Cross. Arm-bands were being issued to workers, with the Red Cross on them, and stamped by the Minister of War, to show the neutrality of the wearer. These brassards were worn by all the Prussian workers as well.

From Paris Mr. Furley went to Geneva for an interview with M. Moynier, President of the permanent International Committee. Thence to Berlin, where he found the National Society very active. At all the principal railway stations were

buffets served by them, also stores of lint, bandages, and medical comforts in charge of ladies ; Doctors and nurses moving about, each with a conspicuous brassard, and male nurses accompanied every train carrying wounded, whether by night or day. The greater part of this activity was under the charge of Knights of the Order of St. John of Jerusalem, whose experience of similar work in past wars was invaluable to the newly-formed Committees, who were now engaged for the first time.

Back went Mr. Furley to London, after two hundred and fifty hours of travel : to find an astonishing growth in the British National Society he had left in its infancy, under its active Chairman, Colonel Lloyd Lindsay. The Government had given it three houses in St. Martin's Place for its Headquarters, and here a scene of intense but orderly activity prevailed. The Ladies' Committee superintended the unpacking, sorting, classifying, and repacking of the stores, which soon exceeded the capacity of their store-rooms. In a fortnight thirty thousand pounds had been collected ; within three weeks they had despatched forty English surgeons to the front, and within six weeks one hundred and ten persons were engaged in the Society's work on foreign soil : sixty-two surgeons, sixteen ladies as nurses or organizers, and other paid and voluntary agents.

Back to France went Mr. Furley, as Chief Commissioner, to organize Ambulance parties and

distribute stores where they were most needed : and his experiences during the war have been detailed by him in volumes that make the most absorbing reading.

The general impression left by all such narratives is that neither the French nor German Medical services were capable of dealing with the huge numbers of wounded in anything like an adequate manner. Voluntary Aid was urgently required and was most generously given. But to be of the utmost use, it required far more careful organization than it had at that time, and above all effective military control.

It was demonstrated that the voluntary units must be under the direction of officers of the military medical staff, and the whole regarded as one machine. The German Authorities understood this and kept their voluntary workers thoroughly in subjection, but these had not been given a sufficiently important niche in the scheme, nor was the military service sufficiently elastic. In particular, it was noted that their plan of quickly moving the sick and wounded from Dressing Station to Field Hospital, and on to the Base Hospitals, while right in theory, had grievous disadvantages when parts of the linked chain of aid had failed. Many cases would have done much better if left for a few days in the country cottages and temporary Hospitals, where they were first treated. But independently of this purely medical

point of view, it constantly happened that patients were carried from Hospital to Hospital before they could be taken in, and life seriously endangered by this delay, lack of food in transit, and the probably overcrowded and insanitary state of the building where they were eventually installed! If the chain of transport and the medical assistance and supply of each Field Hospital and Collecting Station had been as perfect in fact as it may have been on paper, all might have been well. But when once a link in the chain breaks the resulting confusion involves all the others. And transport is the link that soonest breaks in all these times of trial. Therefore the mobile and independent Voluntary Ambulances, with their bearers, their wheeled transport, their doctors and nurses and temporary staff, and Hospital outfit, proved splendid friends to the French and German wounded alike.

The British National Aid Society sent out twelve Ambulance wagons, hundreds of iron bedsteads, clothing and hospital equipment of all kinds.

There were cases reported of the violation of the Geneva Convention, but as a rule this war was a fine vindication of its humane principles. And the mistakes made and the weaknesses revealed served as valuable object-lessons for those who subsequently devoted themselves to the task of organizing the Military Medical Services, as well as the Voluntary Aid Societies.

Mr. (now Sir) John Furley returned to England with one firm conviction: that it was absolutely necessary for any National Society that would be equal to meeting the demands of a great war to train its stretcher-bearers and nurses and to instruct its members and the public in time of peace.

It was on this point that the Chairman and some of the Committee of the British National Aid Society failed to agree with him, or were dismayed by the difficulties in the way. This work was to be accomplished by another force: Sir John turned to his old friends on the Chapter of the Order of St. John of Jerusalem in England. This body was quietly pursuing the even tenor of its way, not yet the possessors of that Charter of 1888, when Queen Victoria constituted it a Royal Order. They were keeping alive the ancient forms of Chivalry, but hardly in touch with the active requirements of modern daily life. Honour should be paid to those who were entrusted with the ruling of its destinies at this crisis, that they were found faithful to the original vow of the Order and its motto, "*Pro Utilitate Hominum.*" For it was a serious step for these inheritors of a Knightly Order, a thing unparalleled in the Annals of Chivalry, this entering upon a great popular educative campaign. Much doubt and anxiety must have been felt in the Council Chamber in Clerkenwell as the schemes for the founding of

the St. John Ambulance Association were discussed there. A movement that, starting from the most modest beginnings, has grown into a world-wide organization, with branches in every British Dependency.

It was decided that the Association should first be formed to spread the knowledge of the principles of First Aid treatment in the accidents of civil life. Plenty of medical evidence was forthcoming that an accident, a fracture, a wound with hæmorrhage, or a head injury, originally slight perhaps, may be turned into dangerous or irreparable injury through the ignorance of those at hand who deal with the victim. It was seen that when the uninstructed man deals with an injury he almost invariably treats it wrongly.

Here was the material for such a Crusade as inspired the Knights Hospitallers of old, a worthy object for their efforts, the fight against the avoidable suffering entailed by ignorance.

The scheme was received by the Medical Profession with the greatest cordiality, and it is safe to say that its phenomenal success is almost entirely due to their unselfish, loyal, and untiring exertions. For there were no large funds available to support this movement; the doctors of their kindness have given their time to lecturing and training the students, for little or no remuneration, inspired by the most truly charitable of motives. From 1877, when the Association came into being, Sir John

Furley spent the years in a campaign as arduous though not as dangerous as any European conflict could have given him. He travelled all over the country, organizing classes and lectures, and arousing the public to a sense of the dangers of ignorance.

It was soon seen that in the large numbers of students, both men and women, who attended the lectures and obtained the Association's certificates on passing their examinations, there was a wealth of material whose technical training was only just begun which assuredly would be wasted if some further organization were not evolved to draw them in. The St. John Ambulance Brigade was therefore started in 1883, into which the most active of the holders of the Association's certificates could be enrolled. Local Divisions were organised of about twenty to fifty members, both male and female, under a Superintendent, who wore a distinctive uniform; and their services for use in civil life were offered to the Police Authorities and accepted.

The first public occasion on which the men of the Brigade were seen at work, whose uniforms are now so familiar in all great crowds, was Queen Victoria's First Jubilee, and their usefulness then in succouring the fainting and attending to minor injuries was immediately appreciated by both police and public. Henceforth the Brigade grew in numbers and importance, and its trained men are now at work on every railway line, in every mine, and

in almost every workshop and factory of the Kingdom; and whenever large crowds of sightseers are assembled its First Aid Stations are at their service.

Its Nursing Sisters receive instruction in Home Nursing and Hygiene, and do much voluntary work among the poor in their homes, as well as on public duty. Besides these stereotyped duties, the Association with its lectures and certificates, and the Members of the Brigade, with their more advanced knowledge of the laws of health and hygiene, have done an incalculable service to the community in spreading a knowledge of these among the people generally. One person in a house who has really grasped the value of ventilation and cleanliness will do much to advertise their virtues among the other inmates.

As the work of the Brigade developed it was seen that here was an instrument of immense use to those whose task it was to harness Voluntary Aid to the State Service in time of War. The Men's Divisions of the Brigade were trained in stretcher-drill, and exercised in it in time of peace, and could be ready at a moment's notice to take their place in the depleted ranks of the Army Bearer Companies should need arise.

And the need did arise. The Medical history of the South African War shows the uses to which these civilian forces of help were put, and the value of their work.

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Meanwhile the British National Aid Society, though dormant in times of peace, awoke at intervals whenever war shook some distant land, and dipped its hand into its liberal resources, helping to send out Doctors, Ambulances and temporary Hospitals, and large consignments of medical stores, always under the direction of some able member of its Central Council.

In the Turco-Servian war of 1876, a small Red Cross party of five English doctors and a dresser went out to Belgrade in August, and offered their services to the Servian Army, which gladly accepted them. This was a terrific experience, the combatants seeming to know little and care less for the Geneva Convention. But on the Doctors' report of the state of things reaching Headquarters, the British National Aid Society sent Sir William MacCormac and Colonel Lloyd Lindsay, with funds to the amount of ten thousand pounds, to take command of the party and form a regular British Red Cross Detachment, with its own transport wagons, stores and equipment. As an instance of the useful independent work this was able to do, on one occasion they heard by chance from a villager that eighty-nine wounded had been collected in an out-of-the-way village, after the battle of Alexinatz, and transport failing, had been left there and forgotten. The British party hastened to their assistance, and found them lying there on straw, untended, unfed, without

water to drink or wash in, no Doctors, no nurses, no dressings. A temporary Hospital was quickly formed, and they were all restored to health but one who succumbed to gangrene.

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During the Russo-Turkish war of 1877-8 the National Aid Society spent thirty thousand pounds on sending Doctors and stores to the Baltic, chartering its own steamers. A great many British surgeons were employed by the Red Crescent Society with the Turkish forces, the greater number being financed by the Stafford House Committee, which was formed for the relief of sick and wounded Turkish soldiers. They spent forty-three thousand seven hundred and fifty pounds in two years, and sent fifty-three surgeons out to the front, organizing Stationary Hospitals as well as Ambulances and kitchens; and treated over seventy thousand cases. The number of casualties was very great. One of these Red Cross Hospitals, under Dr. Sandwith, was at the Shipka Pass, where there were some ten thousand wounded to deal with. They had annexed the services of a Bulgarian Doctor at Adrianople, who was very useful both as Anæsthetist and Interpreter, but one day as he was giving chloroform to a patient for Sandwith, he was espied and arrested, taken back to Adrianople, and hanged from a street lamp as a spy!

Stories of the violation of the Geneva Convention

are numerous, and yet the new spirit of humanity in the treatment of the fallen was visible.

Over one hundred British Doctors worked among the Turks, of whom thirty or more contracted dangerous illness, principally typhus or enteric; ten per cent. of these died, some were taken prisoner, and others were wounded. At Erzeroum, Dr. Denniston remained solitary at his post in charge of two Hospitals with five hundred cases in them; two of his English colleagues were dead and the three others down with typhus.

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In the Zulu War of 1879, with the disaster at Isandula and defence of Rorke's Drift, the National Aid Society spent three thousand two hundred and twenty-seven pounds, chiefly on medical stores and comforts, while several British Doctors were sent out.

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The first time the National Aid Society had occasion to help our own forces on any large scale was in Egypt and the Soudan, in 1884, when Wolseley led the expedition for the relief of Gordon. Altogether thirty-four thousand pounds was expended on medical comforts and on acquiring a steamer on the Nile, which was very useful to dispense stores to the Army Hospitals and tow Nile boats full of wounded. The English surgeons and nurses they sent out worked

amicably with the Army service. One of the special features of this war was the great distance most of the wounded had to be transported on stretchers or in camel cacolets. For instance, seventy-five men were collected at Metemmeh, after the battle of Gubat, and had to be carried on stretchers one hundred and seventy-five miles across the desert to Korti on the Nile. What this meant to both carriers and wounded in the Soudan in February, when the temperature by day was one hundred and twelve degrees in the shade, can perhaps be imagined ; while the escort were continually harassed by the enemy. This feat was successfully performed, and the wounded reached Hospital in safety.

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When war again broke out in Eastern Europe, and Turks and Greeks were opposed in 1897, the *Daily Chronicle* opened a National Fund for the Greek wounded and financed five English doctors with the Greek Army. The National Aid Society spent three thousand six hundred pounds on medical necessities in this war. It was on this occasion that Röntgen Rays were first used in war hospitals to locate bullets before operation. And Mr. Abbott, the chief surgeon of the English party, laid down this axiom : " That the less wounds are tampered with before satisfactory surroundings are reached the better."

This was a new dictum, and depended for success largely upon the efficiency of the Army Medical Transport Service. Hitherto in these European campaigns the Ambulance parties, whether belonging to the Army Medical Corps or to independent Red Cross Societies, had been more or less self-contained and unrelated to other establishments. The principle of collecting the wounded at Dressing Stations, classifying them, first-aiding them, and evacuating them to suitable Stationary Hospitals further to the rear for real treatment, had not yet been perfected. These working Ambulances with their temporary Hospitals found it extremely difficult to dispose of the wounded they had once picked up until convalescent, or dead. If they declined to amputate a limb or perform a major operation for lack of "satisfactory surroundings," they would probably be unable to find either the transport or the more satisfactory Hospital to which to deliver the man for treatment. It was now or never for the operation, and they had to chance it. In matters of sepsis, chance is a treacherous friend to the wounded man; so the statistics tell badly against these hasty operations. But before condemning, it is fair to ask whether there was any alternative before the surgeon.

CHAPTER XIII

1898-1901 A.D

Voluntary Aid in the South African War—The Central Red Cross Council
—Organizing the forces of help—Hospital trains—Foreign offers
of aid—The Private Hospitals.

IT was after the Sixth International Conference of Red Cross Societies at Vienna, in 1897, that in England the project of co-ordinating and co-relating all the forces of help first took shape. Hitherto the Army Medical Service had consisted of Surgeons, in four ranks: the Surgeon-Generals occupied with administrative duties, the Surgeon-Majors in the medical work of the large General Hospital at Netley and the Station Hospitals throughout the Empire, and the Surgeons with their Battalions. The "Army Hospital Corps" supplied orderlies for ward service.

The Royal Army Medical Corps was now called into being, in which the medical was allied with a military organization. The surgeons became officers with regimental rank, and the orderlies of the Hospital Corps became the rank and file of

the Royal Army Medical Corps; the Bearer Companies were added to these, and the whole unit greatly increased in numbers and effectiveness of training.

Before it was very old, war broke out in South Africa. The medical lessons of the war were made the subject of close study, and the result is to be seen in the present-day organization of the Royal Army Medical Corps, which went through so severe a trial in its infancy, and the place now allotted to civilian efforts in the whole scheme.

The Royal Army Medical Corps had best be described at a later stage in its development: the most interesting and instructive side of the work done in South Africa from our point of view is that of Voluntary Aid.

Among other things, the exigencies of war revealed an important gap between the field service right up at the front, and the Base Hospitals, which would only be adequately filled by a voluntary service, capable of being called into existence and dissolved again at will. This gap, which the civilian alone can fill, had been pointed out forty years before by the promoters of the Geneva Conference, but it seemed as if the Nations had found it peculiarly difficult to give this an organization sufficiently elastic yet stable, that it might be immediately ready in time of war to show the fruits of work done in peace time. War seems to be needed to inspire the

public with that needful degree of keenness ; but War is only too apt to show their enthusiasm run wild, philanthropy out of its senses, help thrust upon the Authorities till they are crushed beneath its weight ! As we have reached the point in our story where everyone was looking to see how this could best be harnessed and disciplined, we find the most instructive feature of the South African War in the supplementary aid given by the public, in money and goods, and by the existing philanthropic societies, in personal service.

In his report of the proceedings of the International Conference of 1897, Major Macpherson, referring to Auxiliary Aid, inserted a word of warning against our lack of a central organization.

“ Voluntary Aid,” he said, “ such as would be forthcoming in abundance in the event of our being involved in an international war, would come upon the Military Authorities in the form of a mass of unorganized and untrained elements, probably so unsuited to the actual requirements of the moment that, for the time at any rate, the administration of the regular Army Medical Service would be considerably hampered and embarrassed.”

After this, Lord Lansdowne, Secretary of State for War, had an informal conference on the subject with the representatives of the National Aid Society, the St. John Ambulance Association, and the Army Nursing Service Reserve. Following

which a permanent Central Red Cross Council was formed for the British Empire, with Headquarters in London. On this Council the National Aid Society was represented by Lord Wantage (Chairman), Lord Rothschild and Sir William MacCormac: the St. John Ambulance Association, by Viscount Knutsford and Sir John Furley: the Army Nursing Service Reserve, by H.R.H. Princess Christian and Miss Wedgwood. In January, 1899, this Council received official recognition, and the Deputy Director-General of the Army Medical Service was appointed to represent the War Office on it, and the Assistant Adjutant-General of the Mobilization Service and the Assistant Director of the Army Medical Service were added, while Major Macpherson, R.A.M.C., became secretary.

It was about this time that the National Aid Societies all over Europe followed the example of the Dutch Society, and universally adopted the title of Red Cross Society.

Thus there was in existence in England a central organizing body which had established relations with the War Office authorities. But before this had been able to do anything to engage public interest or draw the Nation at large into a comprehensive scheme, War broke out in South Africa. The newly-constituted Red Cross Council, though they had had no time to organize properly, tackled their great task with praiseworthy enthusiasm.

They laboured incessantly to reduce the mass of unrelated offers they received to an orderly and effective service. They preserved an admirable cordiality and co-operation between the different societies and individuals and the War Office. And they worked unrestingly to bring to the aid of the wounded man, in the form and at the time most valuable to him, those necessities and comforts which public benevolence so freely poured out.

The British public, collectively, is both wealthy and sentimental, and this was the first big war within the bounds of its short memory in which large numbers of British troops had been engaged. Thus it flung its largesse about, and heaped it upon the gallant little band of organizers, till they staggered beneath the load of it. But they were determined that it should not run to waste: manfully they clung to their strong conviction that only in strict subordination to the Military Medical Service could the amateur efforts of public philanthropy produce any of the good effect desired. Their conviction received its justification. In no previous war had voluntary effort been given so definite a place in the military scheme, and in none of them had the medical service been so effectively managed. Almost all the little troubles and embarrassments, and the perhaps inevitable friction that occurred here and there, were the consequences of the too lenient administration of

military authority, and the insufficient training and organization in peace time of the voluntary work and workers.

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To begin with the work at home, this fell into two categories : gifts in kind and personal service.

The task of receiving and distributing the first was allotted to the Order of St. John of Jerusalem, who opened a large central Depôt under the command of one of the Knights, Lieut.-Colonel Holbeche. Here goods of all kinds were stored, repacked, and their transport and despatch arranged for, to those centres in South Africa which the Chief Commissioner indicated as being most in need of them. So many gifts and of such varying value were sent by a willing but uninstructed public, that the St. John Ambulance Association found it advisable to issue memoranda from time to time, stating what would and what would not be acceptable. And following their directions, working parties of ladies all over the Kingdom fashioned useful garments for Hospital or Service use.

In the second category stand the nurses and male volunteers. All offers to go to the front as women nurses were referred to the Army Nursing Service Reserve, and it was arranged that the qualifications which that body had hitherto insisted upon should be required of all nurses sent out,

and that they should be first enrolled as members of this Reserve.

“In time of War the applications that pour in to the Medical Service for employment as nurses at the front are numerous and varied. Women of high social position, women with qualifications for nursing, women with no qualifications, all feel that they have a special mission in connection with Sick and Wounded soldiers, and had the rules of the A.N.S.R. not been rigidly adhered to in the selection of Nurses for employment in Military Hospitals in South Africa, the difficulties of administering the Medical Service of the War would have been greatly increased.” (Report on Voluntary Organizations during the South African War.)

The Chief Commissioner of the St. John Ambulance Brigade arranged with the War Office to supplement from the ranks of the Brigade already trained in stretcher work and first-aid, the Bearer Companies and Hospital Staffs of the R.A.M.C. And it was further arranged that all the applications of male assistants willing to go to South Africa in any capacity should be referred to the S.J.A.B., who would be fully informed of the War Office requirements.

The offers of qualified civil doctors and surgeons were dealt with by the Director-General of the Army Medical Service.

Later on, special committees were formed to



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SOUTH AFRICAN WAR.

Ward in General Hospital No. 10, formerly Grey College, Bloemfontein, South Africa.

THE
JOURNAL OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE

equip and send out small Hospitals, privately subscribed for; but all were in touch with the Central Red Cross Council, who negotiated with the heads of the Army Medical Service, and were able to give authoritative pronouncements as to what was practicable.

Later still there were offers of houses and homes for the reception of invalids from the front to deal with, a most complicated business. And help for the families of soldiers, most of the distribution of which was handed over to the "Soldiers' and Sailors' Help Society," by which large sums of public and privately subscribed money were disbursed.

An appeal for funds was published in the Press by the Red Cross Council, to which an extraordinary response was made. By December, 1899, sixty-five thousand pounds had been given, and by May, 1901, no less than one hundred and seventy-eight thousand nine hundred and fifty pounds.

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A Special Commissioner was sent out at the outbreak of war, to work with the P.M.O. of the Field Force, to keep the Council informed of the needs of the Medical Service at the front, and to take over the direction of the forces of aid in the Colonies concerned. Colonel Young filled this post for the first few months, and when he was recalled to England in January, 1900, to his work

as Secretary of the Patriotic Fund Committee, Sir John Furley took his place.

In South Africa there were a good many separate societies and private efforts, entailing a good deal of waste, but a Central Good Hope Committee was formed at Cape Town as a branch of the London Committee, with which it worked in very cordial alliance. Sir John Furley did much to arrange this, and to pull into shape all the straggling efforts of help in the Colony. Under him were two Assistant Commissioners, Mr. Bonham Carter and Dr. Chepmell; and later, Colonel Ryerson, of the Canadian Branch of the British Red Cross Society, was made Assistant Commissioner on the Headquarters Staff of Lord Roberts's Army.

The Commissioners were empowered to purchase out of Red Cross Funds all necessary supplies asked for by the medical officers of the Hospitals, besides being able to draw on the innumerable local depôts of supplies arranged by them all over the country. They were thus able very effectively, and at short notice, to supplement the Government Stores, which were oftentimes delayed through lack of transport facilities. All the problems of Ambulance work at or near the scene of operations and along the Line of Communications alike, seem to rest ultimately on Transport. The voluntary service which can manage the carriage of its own material and produce a wagon-load of supplies without temporarily robbing

the Commissariat or Ammunition Departments of that wagon, is the one of greatest value. Knowing this, the Council early determined to send out their own Hospital Train. By this they could send up their stores of medical comforts, dressings, instruments, and drugs, right to the front, and bring back the wounded to the Line of Communication and Base Hospitals.

In the Exchequer of the National Aid Society (now practically merged in the Red Cross Council) twenty thousand pounds still remained, and this was expended in fitting out the "Princess Christian Hospital Train." It was the first to be made in this country, and the credit of its design and equipment belongs largely to Sir John Furley. It consisted of seven corridor carriages: in the first two were compartments for two doctors, two nursing sisters, two wounded officers, for stores and linen, and a dining saloon and dispensary. In each of the four wards there were berths for eighteen invalids, arranged in three tiers on either side of a central passage, lavatory accommodation, and compartments for Hospital orderlies. The kitchen and pantry and accommodation for cooks were in the seventh coach. The whole train was painted white for identification, with a red cross on its panels. The problem of loading the wounded into the berths from the narrow gangways has been dealt with in various ways in different Hospital trains.

A second Hospital train for use on the other Line of Advance was seen to be needed, and Sir John Furley arranged this locally. He managed to secure a fine dining-car belonging to the Orange Free State Government, to this he added a post-office van and bogie truck, a second-class saloon and kitchen car, and a third-class coach. It was arranged for one hundred and fourteen beds : these were of stout canvas slung on bracket frames which had been designed and sent out from England for the purpose of supporting stretchers in ordinary railway carriages. These movable brackets could be easily folded up and the mattress and bedding rolled up, to allow space for the convalescents to sit up in chairs or move about. The beds were arranged in three tiers on either side of a gangway, and there were separate compartments for officers, for two doctors, two nursing sisters, and several Hospital orderlies : while a pack store, lavatories, store-room, mess-room, and office were all added.

* * * * *

A very useful branch of the work of the Good Hope Committee in conjunction with the Red Cross Council was the provision of Kit-bags for the invalids on Hospital Trains. These kit-bags cost about eighteen shillings apiece, and contained a flannel shirt, a suit of pyjamas, a pair of socks, slippers, handkerchief, hair brush, towel and sponge, soap and tooth-brush, with sponge-bag.

They were first suggested by Lady Charles Bentinck at a meeting of the Good Hope Society, and were first supplied to two ordinary trains, without hospital equipment, employed in bringing Lord Methuen's sick and wounded down to Cape Town. The doctors were delighted with them: only too often the wounded were entrained in the clothes they had fought in, and with no kit, or material for washing. Altogether fourteen thousand of these kit-bags were distributed during the war.

Warm clothing was supplied to invalids coming home, and Committees of Ladies arranged Railway Station refreshment buffets, where drinks, eggs and milk, fruit, soup, and comforts for the sick on the trains could be procured.

The "Princess Christian Hospital Train" had the distinction, on its maiden journey, of being the first train to cross the temporary trestle bridge built by the Engineers over the Tugela River, and the first into Ladysmith. Only three days after Sir Redvers Buller's entry into the beleaguered town, the Red Cross Commissioner arrived with a wagon-load of Hospital stores, very gladly welcomed by the medical officers in charge.

The St. John Ambulance Association supplied from its factory at Ashford one hundred and fifty military stretchers with covers, intended for use on specially-made frames in Hospital trains adapted from ordinary coaches.

Altogether two hundred different hospitals of

various kinds were given substantial grants of stores and equipment, from the Base in Cape Town to far up country in the fighting area. From England and the Colonies, thirteen thousand bales of goods were sent for distribution, valued at thirty thousand pounds; and forty thousand pounds were spent in South Africa. While the Good Hope Society spent eight thousand pounds, and gave away large quantities of clothing and goods.

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The St. John Ambulance Brigade had concluded its arrangements with the War Office directly war was declared, for supplementing with the trained men of its divisions the rank and file of the R.A.M.C. in the Bearer Companies and the Military Hospitals.

At the beginning of the war, full details of the conditions of service, pay, and qualifications required, were published throughout the Brigade, and volunteers were asked to send in their names and undergo medical inspection. Thus, when the War Office or the Committee or donor of a private hospital asked for men, these were picked out of each of the six Districts into which the Brigade is divided, and were collected at St. John's Gate, Clerkenwell, where they had special drill and instruction for a week, and received their field kit. The cost of their own personal clothing, about

two pounds ten, they bore themselves ; the field kit, as ordered by the War Office, and costing from six to eight pounds, was paid for by the Red Cross Council or the Hospital Committee, who also paid fares and travelling expenses.

Between November, 1899, and January, 1901, one thousand eight hundred and eighty-four men of the Brigade went to South Africa, of whom some sixty succumbed to disease.

The civil staffs of the Imperial Yeomanry Hospitals, the "Langman" and other Private Hospitals, and more than half the staff of the *Princess of Wales* Hospital Ship were drawn from the Brigade.

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The Army Nursing Service Reserve, which had been started by Princess Christian in 1897, the qualifications of its nurses being the same as those of the Army Nursing Service, did very valuable work. At the outbreak of war the number of nurses in the Reserve was one hundred and one ; between that date and May, 1901, eight hundred and thirty-nine were added to the Staff, the total applications received being one thousand two hundred and ninety-four. Not only in Africa, but in filling Army Hospital posts at home, the Reserve was made use of. Over two hundred nurses had had to be engaged locally in South Africa to supplement the hospital staffs at the

beginning of the war, "of whom as a body nothing but good can be said" (Chairman of the Good Hope Society). But owing to the fact that only nurses of the Army Nursing Service Reserve were officially recognized, it was afterwards arranged that these could be locally enrolled in the Reserve, the Committee of the Good Hope Society entrusted with this duty undertaking that only duly qualified nurses should thus obtain entry into its ranks.

The Hospital Ship *Princess of Wales*, a yachting cruiser, adapted for the purpose, was fitted up and sent out by the Red Cross Council to transport invalids to England. And a Committee of American Ladies in London followed this example and presented and financed the Hospital Ship *Maine* for the same work.

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Although in this war, as will no doubt occur in all the wars waged by the Great Powers, with a large and opulent public to support them, our Home and Colonial Voluntary Aid societies were able to carry out all the work needed to supplement the State service, much assistance was kindly offered and some accepted from foreign Red Cross societies.

The French "Société de Secours aux Blessés" (the eldest of the three associations officially recognized in France) offered all the equipment of two

of their auxiliary hospitals. This was accepted and was of great use in two of the large General Hospitals.

Four thousand francs in money was also handed to the Red Cross Council for disbursement.

From Italy came handsome gifts of wine for use in hospitals. From Spain came money.

The Red Cross Society of the Netherlands, having given considerable medical assistance to the Boers, offered to present a Field Ambulance similar in organization, to work with our Army; an offer which was declined, since the sphere of help allotted to the British Red Cross Society was in the Base Hospitals or on the Line of Communications.

The impetuous Norwegian Red Cross Society sent out a Doctor early in the war to see what he could do, but he was detained at Durban, as no outside aid was being accepted by the Army Medical Service. Great dissatisfaction was felt in Norway at this reception of their well-meant offer, so the British Red Cross Council made tactful representations, and the matter was happily arranged by giving him medical charge of the Boer prisoners on board the *Catalonia*.

The Geneva International Committee issued a circular early in the war, suggesting an International Organization for the aid of the sick and wounded troops, and the inhabitants of the theatre of war; and the Portuguese Red Cross Society proposed that their Agency at Lourenço Marques

should become its headquarters. This suggestion was unfavourably received by the British Red Cross Council, who felt competent to do all that was required by the Military Authorities, and the scheme was dropped. Our armies were shortly after in occupation of the Orange River Colony and the Transvaal, and depôts of stores were at once formed by the Red Cross Commissioner in all the principal towns.

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For the first time in any of our wars, Private Hospitals were equipped and sent out, and did most valuable work. These were all under the Central Red Cross Council, but were administered by private committees.

The first of these was the "Portland Hospital," so named because the Duke of Portland gave five thousand pounds towards its equipment and maintenance. Since it was the first of its kind to be called into existence, the Red Cross Council had to negotiate at some length with the War Office as to its scope and the conditions on which it would be acceptable. Having once been arranged, these same conditions were made the standard for all the other private hospitals afterwards presented.

These conditions were that the Medical Officer in charge must be an officer of the R.A.M.C. appointed by the War Office. That the Hospital

must be attached to one of the General Hospitals of the Medical Service in South Africa. And that it was to be placed at the disposal of the Military Authorities without restrictions.

It was arranged for one hundred beds. The Staff, besides the P.M.O. of the R.A.M.C., consisted of four civil surgeons, six nurses of the A.N.S.R., two non-commissioned officers of the R.A.M.C., and twenty-six men of the St. John Ambulance Brigade; two cooks and four servants.

It was opened in January, 1900, at Rondebosch, and attached to No. 3 General Hospital; afterwards being transferred to Bloemfontein at the time of the enteric epidemic in April, 1900.

The "Langman" followed on the same lines. It was the gift of Mr. Langman, who not only paid for all its equipment and transport to South Africa, but bore all expenses, except food, for six months. It was designed for one hundred beds; six tents had ten beds each, and five square bell-tents had four beds each: while there were seven tents set apart for officers, together with tents and screens for stores and offices. Its P.M.O. was an officer of the R.A.M.C. appointed by the War Office; it had besides four civil surgeons and physicians, five medical students as dressers, and a quartermaster. Twenty-six men of the St. John Ambulance Brigade formed the rest of the staff, with seven servants.

The special feature of this hospital was that the

whole of the equipment and personnel sailed together on one boat, and were never separated : thus there was no long and aggravating delay in getting to work. The equipment was so well packed that the whole thing, including stores for a hundred beds, went up country on five trucks. As Mr. Langman desired that it should get to work as near the front as possible, it had an establishment akin to that of a Stationary Hospital on the Line of Communications ; therefore no women nurses were employed.

The hundred beds of its first starting were afterwards increased to one hundred and eighty, and four Nurses of the A.N.S.R. were added to the staff, and eight regimental orderlies.

It was opened at Bloemfontein in April, 1900, and in November Mr. Langman presented it to the Military Authorities.

Among other hospitals privately owned was the " Van Alen Hospital," given by an American citizen ; it was in the form of a regulation Section of a Field Hospital, for twenty-five beds, being afterwards expanded to accommodate one hundred beds, and was opened at Kimberley in March, 1900.

The " Princess Christian Hospital " was the gift of Mr. Alfred Mosely, a South African sympathizer ; it was for one hundred beds, and followed the organization of the " Portland."

The Welsh Hospital, subscribed for by the people

of Wales, was for one hundred beds on similar lines.

The Irish Hospital was the gift of Lord Iveagh : this was a regulation Stationary Hospital, of one hundred beds.

The Edinburgh and East of Scotland Hospital had accommodation for one hundred beds, in huts : it was situated at Norval's Pont.

The Scottish National Red Cross Hospital was organized by the St. Andrew's Ambulance Association, and was opened at Kroonstadt in June, 1900.

The Imperial Yeomanry Hospitals were of a more ambitious design, and covered a much larger sphere of action than the other private hospitals, being more in the nature of an established military organization, though they were equipped and maintained by subscribed money and supervised by an influential committee.

They had a large Base Hospital of five hundred beds at Deelfontein, which was increased to one thousand beds during the enteric epidemic. In the twelve months, March, 1900 to 1901, it treated six thousand and ninety-three cases.

The idea that animated the originators was that the Imperial Yeomanry should be passed on to this hospital as far as possible from the Clearing Hospitals and Line of Communications Hospitals to which they had been taken, and that they should find here more of the comfort to which they were accustomed in their own homes.

The Imperial Yeomanry Hospitals Committee also arranged a Yeomanry Field Hospital for one hundred beds, with a Bearer Company attached. This treated two thousand six hundred and ninety-two cases in the field; housed one thousand one hundred and sixty patients for prolonged periods, and took in two hundred and sixty-five sick Boer women and children temporarily. Another Branch Hospital was started at Pretoria after Lord Roberts's Headquarters was established there. It was arranged for four hundred beds at first, afterwards holding five hundred and thirty.

Three less elaborate establishments were started: the Mackenzie's Farm Branch of the Cape Town Hospital, for one hundred beds, open July, 1900, to March, 1901. Another Branch at Elandsfontein, for fifty beds, was at work from June to December, 1901. And a Convalescent Home for officers at Johannesburg for eight beds, opened March, 1901.

All these were managed by the Imperial Yeomanry Hospitals Committee. The funds at their disposal amounted to some three hundred thousand pounds; the surplus in hand at the end of the war was about forty thousand pounds.

The number of hospital beds, with staff, which were thus placed at the disposal of the Military Authorities was, according to the original schemes, one thousand eight hundred and twenty-five, or one-tenth of the total accommodation of the war



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SOUTH AFRICAN WAR.

Loading wounded on to a hospital train at Orange River.

THE
AMERICAN
MUSEUM OF NATURAL HISTORY
NEW YORK

hospitals in the country : this was greatly increased in times of pressure. In the Imperial Yeomanry Hospitals alone, it was increased to one thousand nine hundred and twenty-six. And was more than doubled in most of the others.

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At the end of the war the P.M.O. of the Army in South Africa wrote to the Chief Commissioner of the British Red Cross Council to express officially his appreciation of the great value of the work done by the Council and allied voluntary associations.

“In a war of the magnitude which this present one assumed, it would have been almost impossible for the Medical Service to provide and distribute the thousand and one items of comfort and luxury which the sick and wounded were permitted to enjoy through the beneficent assistance of the Society which you so ably represent in South Africa.

“The enormous difficulties experienced in getting stores up to the front is well known to you, but as soon as any connection with a body of troops was effected, it was noteworthy that the Red Cross stores were not long in making their welcome presence felt. The Hospital Trains furnished by the Society have also been of the utmost value and have helped me enormously.”

This was something more than an official expression of conventional gratitude; it was the genuine acknowledgment of the great value to the organizers of the Army Medical Service of those supplementary works which only the voluntary societies can really carry out.

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Among the criticisms of the South African Medical Arrangements as a whole, and the lessons taught by this war, a few instructive points emerge. Chief of these may be said to be the necessity for some effective organization of aid to the sick during transport. It belongs to the voluntary worker to form Rest Stations on the Railways, and arrange Refreshment Buffets and the preparation and cooking of food to be given *en route*. Even in Field and Stationary Hospitals the whole question of invalid cookery and diets, and their administration, is a difficult one, and capable of considerable improvement. This was brought forcibly home to those in charge of large numbers of enteric cases.

The work of the Bearer Companies is very heavy, especially in hilly country, where the difficulties of the actual carrying are great; but in open country it is not very much less hard, as Dressing Stations have to be placed so much further back, and wheeled transport is likely to draw the enemy's

fire, resulting in long journeys on foot, with loaded stretchers, which involve very great fatigue.

Part of this task might possibly be allotted to volunteers. It was also seen in the Stationary Hospitals that the regulation number of surgeons might be reduced if a larger staff of dressers and Nursing Sisters were employed. Undoubtedly in the medical wards for the treatment of diseases such as enteric, which require very careful and continuous attention, a greatly increased staff of female nurses would be of value.



EGYPTIAN CAMEL-LITTER.

CHAPTER XIV

1904-1913 A.D

The Japanese Army; its health in the field—Its Medical Service—Its Hospitals—The working of the Geneva Convention—The Medical Services in the Balkan War—Neglected sanitary precautions and the punishment—British Red Cross Hospitals.

IT is generally admitted that the medical arrangements of the Japanese Army when operating against the Russians in Manchuria in 1904-5, were the most complete and satisfactory that have ever been seen in a great war. The organization of their Field Hospital and Bearer Services follow so much the lines of our own that it is instructive to see them at their work.

It must first be acknowledged that the general health of the troops was extraordinarily good. It was a matter of scrupulous care to the Military Commanders, who were held personally responsible, and were advised but not directed by the P.M.O. on their Staff. But the work of safeguarding their health was largely put into the hands of the men themselves: they had been previously instructed in all necessary matters concerning it, and

were taught the great importance of sanitary precautions.

Illness was divided into three classes: First Class Illness included wounds and sickness due to hardship and exposure; Second Class, all ordinary disease; Third Class, all that is brought on by personal carelessness, and was considered a disgrace to the sufferer. A weekly medical inspection, stripped, was held of all troops and followers in camp, and a daily sick parade to detect urgent cases.

Guards were set over drinking water, which was always boiled, the large Chinese iron rice cauldrons being available for this purpose. The Japanese drink much tea, and failing this, hot water. As a rule, good drinking water was always available in this campaign owing to the hilly country in which the troops operated.

Troops were usually quartered in Chinese farms and villages, turning out the inhabitants, in preference to being housed under canvas. On approaching a village, the P.M.O. with the force rode on ahead to examine the houses, and have them thoroughly cleansed; where he found sickness, he posted notices of isolation, on different coloured paper—white for smallpox, which was common; red for dysentery; yellow for cholera, which was rare.

The Japanese of the lower classes take very hot baths daily, and to this habit the soldiery clung all through the campaign. Almost every day, on

The organization of the Japanese Medical Service is very like our own. Attached to each battalion are two surgeons and one non-commissioned officer of the Army Medical Corps ; and to each Company, one non-commissioned officer and four stretcher-bearers. Each man has a First Field Dressing in his pouch, and each medical non-commissioned officer has a surgical haversack, splint material, and elastic tourniquet. The surgeons have two medical and surgical panniers and a pocket case of instruments.

They form temporary First Aid Stations, where they adjust splints, and tourniquets, and fix diagnosis tallies, sorting the cases for the Battalion Stretcher Bearer Company. The First Field Dressing is applied by the men themselves, or their comrades, before the case reaches the First Aid Station. A special duty of the non-commissioned officer is to note the name and number of each man killed, with cause of death and nature of wound, for use in compiling statistics.

The Bearer Battalions are divided into three parts : No. 1 carries the wounded from the First Aid Stations behind the firing line to the main Dressing Station ; No. 2 forms the staff of the Dressing Station ; No. 3 is responsible for the transport between the Dressing Station and the Field Hospital. Each Company consists of one hundred and sixty men with forty stretchers. Very severe physical exertion is seen to fall to the

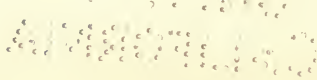


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RUSSO-JAPANESE WAR, 1904.

Wounded Japanese brought into camp under the Red Cross flag.

[Facing page 296.]



lot of these Bearer Companies. For instance, during the battle of the Sha-ho, on October 12th, 1904, three hundred and forty-two wounded had to be taken by one Company to the Dressing Station at Yang-chia-wan ; even though some could walk, it involved so many journeys back and forth that each squad of four must have covered at least ten miles of rough country, half the distance done with loaded stretcher.

It was found that improvised Chinese carts and coolies pressed into the service could be utilised for the evacuation of the wounded from the Dressing Stations to the Field Hospitals, performing it better than the Stretcher Companies, and releasing them for the more important duty between the fighting line and the Dressing Station. As a rule, they were not found to be sufficiently strong numerically to combine both duties. No special wheeled transport was provided by the Japanese ; they employed native resources.

The chief centre of interest was found at the main Dressing Station, which was always arranged in a Chinese house. It was provided with a "Receiving Department," where a medical officer and two clerks took charge of the arms and accoutrements of those brought in, inspected the coloured tallies affixed at the Regimental First Aid Stations, and drafted the cases accordingly to the Departments for "Severe" or "Light"

cases. These Departments worked side by side. The large cupboards found in Chinese houses formed convenient Dressing Tables; two surgeons at the table for "Severe" and one at that for "Light" cases, were assisted by five men. One of these took down notes on the case dictated by the surgeon as he worked. The surgeons wore white linen aprons, sleeves and caps, and their hands were continually sterilized in strong disinfecting lotion. They redressed the wounds, or the previous dressing was approved, foreign bodies or clothing were removed, but no extraction of bullets or probing was done, or ligaturing of arteries. Bleeding was treated by graduated compresses; wounds of the lungs dressed with a compress of gauze kept in place by strips of rubber plaster, and the patient given a hypodermic injection of morphia. Wounds of the abdomen were similarly treated. Very few amputations were ever performed; nor head operations, however urgent the skull injury brought in: all were sent on to the Field Hospital. It is true that the latter often failed to reach the operating theatre alive, but the Japanese authorities were convinced that the best interests of the service were served by not sacrificing the time and space required by these cases.

When the surgeons had finished with them, the wounded were taken to another part of the house and fed, if necessary, and made comfortable;

they seldom remained in the Dressing Station more than twenty-four hours. The surgical stores and appliances were all in charge of the Apothecary, who was responsible for producing them in good order. Another officer had to arrange for the transport of all the cases to the Field Hospital, and collect the carts and coolies needed. As soon as the order to advance was received from the P.M.O. on the Commander's Staff, the Dressing Station was packed up, and the wounded still in it left under the care of a non-commissioned officer, or possibly a surgeon, till the transport for their removal arrived, or a Field Hospital appeared to take possession of them and the whole building.

The Field Hospitals were arranged for two hundred wounded, and were divided into two complete sections capable of working independently. In all the large engagements they had to handle many more than the regulation number of cases, from four to six hundred being treated by three sections. All cases were cleared through the Field Hospitals, though slight ones, and where there were special difficulties of transport, might miss out the Dressing Stations.

In the Field Hospital each wound was carefully examined, a correct diagnosis was made, and the case-paper filled in, which was thenceforward written up daily, in whatever Hospital the patient might be, the observations being dictated by the Doctor to a non-commissioned officer

as he attended the case, a practice which saved him much time and clerical work. These went eventually to the War Office, to the compilers of statistics. Often a whole village would be taken over and its houses converted into the wards of a Field Hospital, which could thus be expanded as need arose. The native furniture was used as much as possible: on the "kangs" (raised platforms that run along the walls of all Chinese houses and can be heated by fires built underneath) matting, blankets, or straw was spread for the patients to lie on, and occasionally mattresses were procurable. Every room was thoroughly cleansed and disinfected before use and kept scrupulously clean. In the Operating Room the heavy Chinese cupboards were often used instead of unpacking the Operating Tables in the Hospital Equipment, mobility being one of the virtues of the Field Hospital. Of course, if at all a prolonged stay were made in one place, more elaborate furniture, kitchens and bathing arrangements would be evolved.

The extreme simplicity and uniformity of the dressings used in all the Hospitals greatly simplified the issuing of medical supplies. They consisted of (1) plain sterilized gauze, (2) absorbent sterilized cotton wool, (3) plain gauze bandages, (4) rubber plaster. They were sterilized in the Field Hospitals in a specially constructed box. The bandages were washed, sterilized, and used again.



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RUSSO-JAPANESE WAR, 1904.

Wounded Japanese on their way to hospital, North Manchuria.

[Facing page 300.]



A very common method of treating fractures was by pegging; nickel plated iron pegs being used and found more satisfactory than wiring.

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The Stationary Hospitals on the Line of Communications were equal in size to about three Field Hospitals, but capable of great expansion. They were formed by the Reserve Medical Staff, of which there is one unit to each Division of the Army. Here all the slighter cases were kept for treatment, and returned cured to the fighting lines; the more severe were passed on to the Base Hospitals. The largest Hospital on the Line of Communications was at Dalny, opened in June, 1904; it was in three sections, the first and third housed in public buildings, the second in the Russian Barracks a mile outside the town. It could accommodate seven thousand patients.

Hospital trains consisted of goods vans, in which the patients were laid on mattresses on the floor; small charcoal hand or foot warmers were provided for each, which would keep hot for twenty-four hours. Large Refreshment Sheds were arranged at certain stations along the line, where hot meals were served to the invalids.

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The special features of the Japanese service in the field were: the extreme mobility of the

Field Medical Units, and especially of the Supply Depôts; the simplicity and uniformity of the dressings and methods of dealing with wounds; the continuous and rapid evacuation of the wounded to the Base Hospitals in Japan; and the exact medical and surgical records kept, even of those killed in action.

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The rank and file of the Medical Service are not a separate unit of the Army. From each company two men are trained annually, in Divisional Garrison Hospitals, after which they pass into the Medical Reserve; the men of the Bearer Companies do the same. In time of war all these are mobilized and form the Field Hospitals and other units in the field. In time of peace the Garrison Hospitals are staffed by civilian Nurses and sick attendants, and in war-time these are moved up to the Line of Communications Hospitals, and the Relief Sections of the Red Cross Society take their places in the Garrison, now become the "Reserve" or Base, Hospitals in Japan. A Relief Section is a complete staff for the treatment of one hundred patients: two Medical Officers, two Sisters, and twenty nurses, male or female. The Female Sections are always given charge of the more serious cases, the operating and dressing rooms; the male sections, of lighter cases. No administrative work

is done by the Red Cross Society: it works entirely under the direction of the Army Medical Department.

These Garrison Hospitals are capable of very great expansion: normally for three hundred or four hundred beds, they none of them made up less than three thousand beds, and some had ten or fifteen thousand by the end of the war. At the outbreak of war there were five thousand beds in the permanent military Hospitals in Japan; by the end there were sixty-five thousand!

They were added to by groups of wooden pavilions, each set of huts being a numbered section of the original Hospital and administered from its central block. Some of the sections had as many as one thousand beds, with their own bath-rooms, laboratory, kitchen and operating theatre.

The floor space allotted to each patient in these Military Hospitals is measured by the Japanese mat, which is six feet by three feet. Three mats are allowed for two men; each lies on one, and there is the width of one between them, with a regulation space of one foot between these and the wall.

A total of 281,587 cases was evacuated from Manchuria to the Base Hospitals in Japan: more than 75 per cent. of the admissions into the Field Hospitals. They treated also 97,850 sick from local garrisons in Japan and Formosa, and 77,805 Russian

prisoners. Thus almost all the work of really treating, nursing, and finally curing the sick and wounded was done in Japan itself. The Hospital death-rate was exceptionally low; from wounds received in action, .8 per cent. of admissions; from all causes, 1.1 per cent. of admissions.

* * * * *

The Battle of Mukden is reckoned the greatest battle of modern times, considering the numbers of men engaged, the frightful havoc made in the ranks, whole regiments of Japanese being mown down, and the length of time the struggle lasted. For eleven days the Japanese continued the assault, and the Russians held the place against them: when they commenced their retreat, it was yet another three days before the victorious Japs entered Mukden.

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The general conclusions drawn by those who compiled the surgical history of the war, as far as they deal with the collection of the wounded, emphasize the different methods required in open or in hilly country. In open country it is found to be very difficult to move the wounded on stretchers out of the fighting line during the day without drawing the enemy's fire. It was seen to be better to carry them by hand to a point about a hundred yards to the rear, where stretchers could be waiting and be loaded in greater



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RUSSO-JAPANESE WAR, 1904.

Surgeons operating on a young soldier in Kojimachi Hospital, Tokyo, Japan.

[Facing page 304.]

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safety. The Dressing Stations also are difficult to conceal in open country, and experience shows that they often draw the enemy's artillery fire, the constant movement of bearers and wounded back and forth being mistaken for the movement of troops.

In hilly country it is easier to move the wounded from the fighting line without drawing fire, and easier to find a hidden and convenient spot for the Dressing Station, but it must be placed very much nearer to the front, owing to the fatigue and difficulty of carrying the wounded to it and evacuating them to the Field Hospital. Thus the first line of medical assistance is seen to be most easily managed in hilly country; the second, and the transport, is easiest in open country.

In night fighting, the Japanese Medical Officers used to fix beforehand the points where Dressing Stations would be established, and indicate them to the troops, that they might be able to find them with less difficulty after dark. Lights were found to draw fire.

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This is not to say that the Articles of the Geneva Convention were not adhered to, but the very great distances which now separate the combatant forces prevent the exact nature of the light, or flag, which indicates a Dressing Station being discerned with any clearness. Colonel Macpherson,

in commenting upon this, has remarked that :
“ In these modern battles, especially when the fighting is over a flat plain and the distance between the firing point and the place hit some miles, all idea of *protecting* the medical units by the display of Red Cross Flags must, in my opinion, be abandoned. I am sure that this is the Japanese Military view of the matter.”

This refers to the flags intended to be seen at some distance. The sign of the Red Cross is entirely effective when the enemy captures a village in which a Dressing Station has been established, or on the brassards of the personnel of the Army Medical Corps.

Further Colonel Macpherson adds : “ The Geneva Convention did not seem to have much application except in the case of captured Hospitals and Establishments such as those at Mukden. Indeed, it is doubtful if the Articles of the Convention go any further than this.” In the case of captured Hospitals its Articles were rigidly adhered to. The Japanese wounded were found to be well cared for in the Hospitals of Mukden. The Russian Staff at work in these hospitals were given every facility to continue their work by the Japanese victors, and were returned under escort to the Russian outposts whenever they desired. In the field also the wounded were well treated by both sides alike.

It was in 1906, after both the South African and Russo-Japanese Wars had been fought, and the lessons they taught digested, that the Geneva Convention was revised and added to. The civilian workers and the Auxiliary Aid Societies received definite recognition in this new version. (See Appendix.)

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The events of the War between the Balkan States are too near to permit of my attempting any detailed criticism of the medical service. Even now, though the clamour of war is for the moment stilled, and those to whom the delicate task of adjusting conflicting interests and apportioning gain and loss is entrusted, are seated about the baize-covered tables of Diplomacy, no one knows what a week may bring forth. But over the desolated fields and the polluted streams and the difficult hill paths of the theatre of war the noise of conflict has given place to silence, and the land is waiting for the harvest that is not there to reap, and for the men who can never come again to till it.

It is the general impression that the Army Medical Services have not stood the test of this short but strenuous campaign as they should. They have not as a rule had the personnel or the equipment to deal effectively with the numbers thrown on their hands; because these numbers have been so disastrously augmented by cases of

preventable sickness. In spite of all the lessons taught by previous wars, with the Japanese methods and their success scheduled in text-books, the authorities failed to take adequate sanitary precautions. They constantly failed to set sentries over springs of drinking water, nor took the simplest measures to keep their troops fit and in the fighting lines. In many ways this war saw a reversion to the old haphazard methods of the Peninsular War, and worse; and the peasant-soldiery, drawn from isolated farms and unaccustomed to the sanitary measures and restraints and duties which are the daily life of large bodies of troops in barracks or in camps, were too ignorant to take their own most necessary precautions. With the result that it was not the Turkish bullets nor the finely-constructed defence works which may be said to have turned the splendid fighting forces of the Bulgarians back from the Chatalja lines: when they had halted there for a certain number of days, they were stricken with irresistible illness, self-poisoned, the victims of their own ignorance. These hardy men, whose wounds healed with a marvellous rapidity, whose dogged courage and endurance were the admiration of all who saw it, were broken up by the sickness they had largely brought on themselves. It was a pitiable spectacle.

The Chief of Staff of General Demitrieff's Army declared that: "For every one man who

comes into hospital wounded, ten come in saying 'I am ill.' " "The illness being of a choleraic type had a profound moral as well as physical effect," a critic with this Army asserted; "the almost complete absence of any sanitary discipline or precaution in the Bulgarian lines at this place earned for them all the diseases that afflict mankind. So far as I can ascertain after careful investigation, there were no sanitary police: no attempts to secure and safeguard a pure water supply: no latrine regulations."

The contrast this presents to the records of the Japanese War, where the physique of the troops employed, their hardiness, sobriety and powers of healing, were so similar, lends point to the modern insistence upon the importance of these health safeguards. Ultimate victory would seem to lie with the Commander who most effectively realizes this truth and translates it into practice.

These Bulgarian peasant-soldiers were the finest of material to work upon, almost immune from enteric and with astonishing powers of rapid healing. "Given the roughest food, the simplest sanitary precautions, and ordinarily good field dressing, and the Army would have marched without disease, and the wounded would have dropped out of the firing line for a few days only."

But how different the actual state of affairs.

The whole medical service in the field was regrettably deficient, and the correspondent just

quoted severely criticizes the methods of first aiding employed. Punctured bayonet wounds were closely bandaged, he says, sometimes even stitched up, without proper cleansing or drainage; hence gangrene, and in many cases the loss of life or of a limb. And the peasants have a horror of amputation. Bullet wounds were often plugged, and thus suppurating matter was imprisoned to affect the surrounding tissues.

At Kirk Kilisse, and at other places visited by King Ferdinand personally, better sanitary arrangements were adopted. And in the Stationary Hospitals matters were very much more cheerful, especially as they had time to settle down and make their arrangements. The purely Bulgarian Hospitals were less advanced in methods or equipment, but those organized by the Red Cross Societies were often excellent. The Russian Hospital at Kirk Kilisse was a model of what such a place should be, and the British Red Cross Hospital there was excellently administered by Major E. T. F. Birrell, R.A.M.C., and had the most up-to-date equipment. These both endeavoured to specialize in serious cases, and refused to overload their wards and staff by taking in more patients than they could do well by. A decision with which all modern reformers will agree, but which resulted in shutting into outer darkness large numbers desiring treatment.

The Turks also, who defended the Chatalja lines of fortification for many days: in a defensive position sanitary precautions are always peculiarly important, and they seem to have ignored this. Thus, when the punishment came, and cholera laid its hand on the lines, the medical service was thrown into utter disorder by the vast number of sick so suddenly requiring housing, segregation and good nursing and diet. They could not give these, and the patients were sacrificed in frightful numbers, the infection spread and panic prevailed for a time.

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The Greek Medical Service was distressingly deficient at the beginning of the war. Captain A. H. Trapmann, who accompanied the Greek Army through the campaign, thus criticized their principal military hospital. "At the base was a military hospital with accommodation for four hundred, which was frequently occupied by six hundred. At first the doctors' orderlies were picked haphazard from any unit. The doctors left at eight p.m., with the result that the orderlies, who were supposed to take duty at night, immediately went to sleep. By one or two o'clock in the morning the hospital was like a shambles, many patients having fallen out of bed, while the lights had gone out. There was no hot water, and the only water available was that in a well

into which a drain ran. Afterwards five ladies assisted, but the most they could do was to attend to the worst cases. Whatever the sick person's ailment, he received a cup of black coffee at six a.m., some soup 'which had looked at meat,' at midday, and a vegetable stew in the evening. No patient was bathed, and only once during six weeks' observation were the rooms washed. Disinfectants, because the smell was unpleasant, were not used. Since then, largely owing to the efforts of the Greek Royal Family and to the patriotism and charity of the people, several hospitals were established and were being run on proper lines, with surgeons and trained nurses in attendance."

It is only fair to add that in time many of the hospitals in Greece reached a high standard of efficiency.

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The voluntary organizations of the belligerent countries made great efforts to supplement the State Services, and it was in the Stationary and Base Hospitals that their aid was chiefly needed, and seen to be most effective.

At the outbreak of war the British Red Cross Society offered aid to each of the five Governments concerned—Greece, Bulgaria, Montenegro, Servia and Turkey, which was cordially accepted by each. Red Cross units were organized,

consisting of three civil surgeons, three medical students as dressers, six nursing orderlies, five orderlies, and a cook ; with complete medical and surgical equipment and stores, and ready for work either in a Field or Base Hospital.

Ten of these units and four Relief parties altogether were despatched to the seat of war, with a total personnel of two hundred and twenty-two, of whom two nursing orderlies succumbed to enteric fever. They established hospitals in each of the countries concerned, and the total number of in and out patients treated in these was sixteen thousand three hundred and fifty-eight.

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A special feature of this war, as far as information is at present available, was the prevalence of typhus. This has been so entirely stamped out in England that our Doctors were faced with a disease practically new in their experience, and had to some extent to experiment upon it. In some hospitals drugs were used, but the chief difficulty appeared to lie in keeping the patient sufficiently nourished to stand the short but very high fever and the subsequent collapse, a completely comatose state usually accompanying severe cases, often with fixed jaw.

CHAPTER XV

1913 A.D

The Royal Army Medical Corps—Its Organization—Its Duties in the Field—Clearing Hospitals—Stationary Hospitals—Hospital Trains—The Reserve of Medical Officers—The Army Nursing Service and its Reserves—Voluntary Aid Detachments.

THIS is the closing chapter of my story. Here we have reached the point where we find modern conditions prevailing. We no longer say "it was," but "it is," thus and thus, although nothing is final; rearrangement and development are always taking place. The regrettable confusion and inadequacy of the medical services at the commencement of the Balkan War well illustrate how easily the old bad conditions can be allowed to mar a modern battle-field. How much yet remains to be done by the Red Cross Societies of the world, not only in self-organization, but in their ancient and almost more important mission of arousing and spurring on the State Services to a proper activity.

The main principles which must rule the organization of an Army Medical Service and the place in the scheme to be allotted to the voluntary worker, have now been evolved, agreed upon and tested. In every country, naturally, differences in Military Administration are reflected in its medical service and in the War Schemes it prepares in time of peace. But having traced so far the steps by which it has gradually obtained its present form, we stand now before the finished article.

The German service is, I think with general consent, admitted to be the most perfectly and minutely organized. It has served as the model for almost all the younger services of Europe, and notably that of Japan. But the German has not recently been seen by us in a big war, and there is naturally a keener interest in our own rather than in that of a rival power, so although I mention the alleged superiority of the German, I shall devote the space at my disposal to a description of the British. It may be taken that the main outlines of the scheme are practically the same in all countries, and that the variations are more in details of organization than in general idea.

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What, then, do we now endeavour to do with the man who falls wounded ? To dress his wound,

and transport him expeditiously to the Hospital where he may be cured.

It sounds so simple, and yet requires such a complicated machinery. The mobility of armies, the huge area of modern battle-fields, the equal chances of retreat or advance, preclude at once the possibility of curing our wounded man anywhere at all near the spot where he receives his wound. What happens then ?

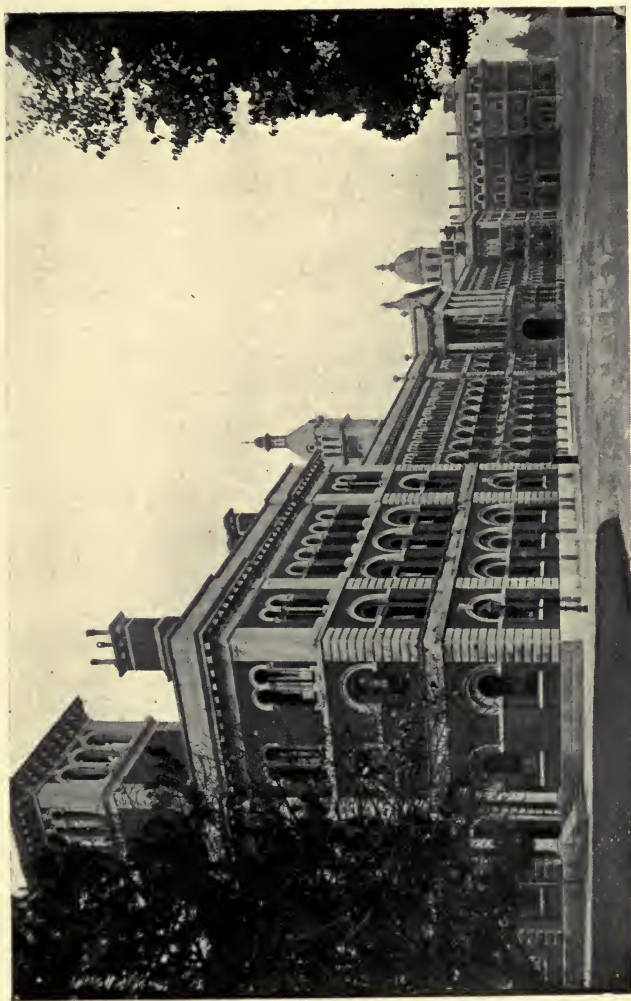
1. He falls : he is attended by the Regimental Stretcher Bearers, and taken out of the firing line as soon as it is possible.

2. The Bearer Company conveys him to a Dressing Station, immediately behind the firing line and probably within the zone of artillery fire : only urgent treatment to save life is given here.

3. Thence he is taken to a Field Hospital, or Clearing Hospital, possibly a mile or two further back, and out of reach of fire. He receives necessary treatment here, is fed, transferred to wheeled transport, and removed to

4. The Stationary Hospital on the Line of Communications, where all the wounded and sick are collected and cleared for Base Hospitals or to return to their regiments. Food, rest, and treatment are given here, and any urgent operation can be performed.

5. If fighting abroad, the convalescents and



From a photograph by Elkingham, Woolston.

THE ROYAL VICTORIA HOSPITAL, NETLEY.

[Facing page 316.]

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incurables are transferred again to a Hospital Ship, and conveyed to England, where they are landed at Netley, our chief military hospital.

It is the Royal Army Medical Corps which accomplishes this feat.

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The self-contained unit of the British Army is the Army Corps. This normally numbers some forty-one thousand men, including the Cavalry Division attached. It is under a General Officer Commanding, with a Surgeon-General on his Staff who is responsible for the medical service.

There are three Infantry Divisions to an Army Corps, each of these composed of two Brigades of Infantry, one Divisional Squadron of Cavalry, and three Batteries of Field Artillery.

And each Brigade of Infantry consists of four Battalions of Infantry, two Machine Guns, one Company Army Service Corps, one Bearer Company and one Field Hospital, known as the Field Ambulance.

To each Division there is attached one Field Ambulance in reserve.

A Cavalry Division consists of two Brigades of Cavalry, with a Brigade Field Ambulance attached to each, divided into two parts, the "Bearer Company" and the "Field Hospital."

To each Battalion of Infantry, and to each Battery of the Field Artillery, a Medical Officer

is attached, who has as his staff : a non-commissioned officer and eight men trained in sanitary duties, to act as Sanitary Police ; a corporal to act as his orderly, and a non-commissioned officer and four men of the R.A.M.C. There are also two privates per Company and Battery, with stretchers, medical haversack, and water-bottles, to form the Regimental Ambulance Detachment, or "Stretcher Bearers," who render first aid to the wounded in the actual firing line, and carry them to the Doctor at his small First Aid Station.

The equipment at the disposal of this Medical Officer consists of two "Medical and Surgical Panniers," tough wicker baskets in pairs for carriage on a mule pack-saddle. These contain surgical instruments, dressings, splints, a few drugs, and restoratives of first necessity. A small tent may be added to the mule's load. Besides this, he is attended by an orderly of the R.A.M.C., who has a "Medical Field Companion," of similar dressings and restoratives, packed in smaller compass and carried by him in pouches and a wallet. Every surgeon carries a pocket case of instruments in a pouch.

He is thus able to form the first advanced line of medical aid, and the Regimental Bearers bring him the urgent cases and return at once to the fighting lines. He moves his small mobile station, which may be in a house, or under a tree, or in his little tent, as often as the firing line advances or

retreats, and his wounded are cleared at once by the Bearer Companies.

The collection and removal of the wounded from the battle-field is entrusted to the "Field Ambulances," which are organized in two divisions, the "bearer division" and the "tent division," the former rendering first aid and carrying the wounded, the latter setting up the field "Dressing Station." These Field Ambulances have a regulation staff of ten officers, including quartermaster and transport as well as medical officers, with over two hundred men of the R.A.M.C. and drivers of the A.S.C.

The Bearer Company consists of a Major, two officers, and about sixty men of the R.A.M.C., with drivers of the A.S.C. attached, with the horses and wagons. A special wagon contains dressings, medical stores, an operating table and tent, and cooking utensils, for the formation of a Dressing Station.

In the rear of the fighting line the Dressing Station is formed. Its regulation Staff consists of the Major in command, one officer, a dispenser, a sergeant-major, two non-commissioned officers and four privates, one a cook. From this a sergeant and others are pushed forward to form a station from which the wagons can work back and forth to the Dressing Station. On this pivot the Bearer Company works, taking over the wounded from the Regimental Stretcher Bearers, and collecting

them from the small first aid stations of the Battalion Doctors. The Bearer Company Section loads the helpless into the wagons, and assists the less severely injured, and brings them all into the Dressing Station, where wounds are classified and coloured tallies affixed to the men's clothing giving Regiment, Number, Rank, Nature of Injury, and Treatment, if any, and necessary warnings as to precautions to be taken in transport. These details are entered also on a counterfoil in the tally-book.

Simple treatment is given here, the adjustment of bandages and splints, the support of a limb, morphia injections; but little except necessary measures is attempted till the cases reach the Field or "Clearing Hospital."

These Clearing Hospitals are mobilized at the rate of one per Division, and for the accommodation of two hundred cases; each has a personnel of eight officers and seventy-seven other ranks, and with stores and equipment requires seventeen service wagons for its transport. Thus it is a mobile unit, carrying its own tents, though more frequently it is housed in some convenient building. It can be subdivided into complete and independent sections, and rest-station parties, where need arises.

Here more advanced treatment can be given, food is supplied, and the cases are kept until they can be evacuated to the Stationary Hospitals on

the Line of Communications. According to the fortunes of war, these Field Hospitals may remain for weeks in one spot or may be moved across country or up the railway at intervals of a few days. Therefore nothing in the way of major operations or actual cure can usually be attempted here. The slightly wounded may be drafted back to their regiments or to the Reserves, and the severely wounded and sick are sent to the Stationary Hospital.

This is the third line of medical assistance, and this is where the wounds are treated, and the sick also. Cases are kept here till discharged cured, or till they can be sent to a large Base Hospital. They are mobilized at the rate of two per Division, nominally for two hundred beds, but are capable of rapid expansion.

In case of need, the established Stationary Hospital can be so far enlarged and its staff added to, that it forms a General or Base Hospital. As a rule, the General Hospitals at home in England are termed Base Hospitals, and the Stationary Hospitals are those specially constructed or arranged in the country in time of war for military exigencies.

Convoys or Hospital Trains convey the cases to the Stationary Hospitals, and thence to Base Hospitals, or for embarkation on Hospital Ships.

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Hospital Trains are a modern invention. The Germans had one or two for use in the Franco-German War, but the first to be particularly adapted for the carrying of a large number of severely wounded, and their treatment on board, was that given by the British Red Cross Council for use in South Africa.

Hospital Trains to carry one hundred patients lying down are mobilized in the proportion of one to each Division.

The principal Military Hospital in the Empire is the Royal Victoria Hospital at Netley, on the shores of Southampton Water. It is an imposing block of buildings, with a façade of a quarter of a mile, and was erected seventy years ago. It has accommodation for about a thousand patients. It is an important Medical School, and has a large staff of Medical Officers and Instructors. Here the rank and file of the R.A.M.C. are trained in ward work and stretcher drill.

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In 1885, a Volunteer Medical Staff Corps had been formed which took the same position in relation to the Volunteer Force as the Army Medical Department does to the Regular Army.

The National Aid Society, recognizing the value of this as a reserve for the personnel of the Army Medical Service, gave a handsome grant of money for the purchase of such ambulance material and

vehicles as were necessary for purposes of drill. With the modern changes in the organization of the Volunteer Force, this Corps was merged in the Territorial R.A.M.C. when the Territorial Force came into being in 1908. It is a very flourishing and useful unit, serving its purpose as the Reserve from which the ranks of the regular medical service can be recruited in war-time.

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The Nursing Service of the Military Hospitals falls into two sections: the ordinary work of the wards is done by trained orderlies of the R.A.M.C. who are under the direction of the Sisters and Staff Nurses belonging to Queen Alexandra's Imperial Nursing Service. Before a candidate can be admitted to this service, she must have obtained her three years' certificate of efficiency in medical and surgical nursing from a Civil Hospital of more than one hundred beds registered as a training school for nurses. She must also satisfy the Board which manages this Service of her fitness as regards education, social position, and character. The pay and conditions are extremely good, and it is a very popular service among nurses.

A scheme that did much to improve the nursing of the wounded British soldier was the Army Nursing Service Reserve, under the patronage of Princess Christian of Schleswig-Holstein. The

qualifications required of its nurses were the same as those for the regular Nursing Service: the Hospital-trained and certificated Nurses were enrolled in its ranks, and were liable to be called upon to fill up gaps in the regular service and supplement it in time of war. During the South African War the Nurses of this Reserve played an important part. Since the war it has been permitted to decline in importance.

There has quite recently been added to the Territorial Organization a "Territorial Nursing Service Reserve," under the patronage of Queen Alexandra, as is the Imperial Nursing Service. Equally strict qualifications of Hospital training and experience are exacted of these, and the Reserve is managed by the same Board of Control at the War Office.

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The present Society known as the British Red Cross Society, is the direct inheritor of the tasks and honours of the National Aid Society and the Central Red Cross Council. It was founded in 1905, under the Presidency of Queen Alexandra. Following the organization of the Territorial Force in 1908, the Society formed groups of Voluntary Aid Detachments in the different counties. In August, 1909, the Secretary of State for War issued to the Territorial Force Associations a

“Scheme for the Organization of Voluntary Aid for Sick and Wounded” in the event of War in the Home Territory. From that time, the Red Cross Society has been actively at work raising, training, and equipping Voluntary Aid Detachments. Each Detachment as it becomes efficient, is registered at the War Office under consecutive numbers, which are published in Army Orders. The minimum personnel for Men’s Detachments is fifty-six; for Women’s, twenty-three. By July, 1913, the Society had registered one thousand seven hundred and fifty-nine Voluntary Aid Detachments, with total personnel of fifty-one thousand and eighty-two, of which about a third are men. The policy of the Society is to discourage, in general, the enlistment in their own ranks of those of suitable age to enter the Territorial Force.

Each Men’s Detachment consists of forty-eight men, divided into four sections with four section leaders, and is officered by a Commandant and a Quartermaster, with a Medical Officer and a Pharmacist attached.

The Women’s Detachments consist of twenty women, of whom four should be qualified as cooks; a Commandant and a Quartermaster, either men or women, with a Medical Officer and a Pharmacist attached, when available.

Many of the Divisions of the St. John Ambulance Brigade are likewise registered at the War Office as Voluntary Aid Detachments, and adopt a uniform organization. The Brigade now numbers eight hundred and forty-nine Divisions, with a personnel of twenty-four thousand one hundred and fifty-nine, increasing at the rate of about two thousand members per annum. The Nursing Sisters form less than one-fourth of the total.

From its inception to September, 1912, the St. John Ambulance Association has granted certificates to nine hundred and sixty-two thousand four hundred and forty-one applicants, who have attended a course of its lectures and passed the concluding examination. To ensure that these continue to advance in knowledge, it grants medals to those who offer themselves for re-examination and obtain seventy per cent. of marks. One hundred and fifty-three thousand seven hundred and twenty-four of these have already been issued, and they are awarded at the rate of some ten thousand a year. The statistics of these two great Ambulance Societies prove how general and how keen is the public interest in the subject to-day.

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The units lacking in the Medical organization of the Territorial Force are Clearing Hospitals, Stationary Hospitals, Ambulance Trains, and the personnel for forming Entraining and Rest Stations.

This is the work that will be delegated to the Voluntary Aid Detachments, and for which they are being trained.

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This constitutes the organization prepared to operate with the British Army in war, either at Home or Abroad. And here we must perforce come to a halt : the next steps will be taken in the future. One can see dimly the direction they will follow. The signposts are pointing the way. The most significant of these is plastered over with placards about the public health. The Crusaders now moving in battle array against Consumption, and other widespread and preventable scourges, are not going to leave the Army Medical Service unaffected. Care for the general health of the Community has spread to its soldiers. Science teaches a rather obtuse generation the value of sanitary precautions in peace as in war.

The entirely unreasonable proportion of loss by sickness as compared with loss by wounds on the modern battle-field, has at last been realized. The whole of this book emphasizes this disproportion. We can see that not only disease, as such, but the complication of wounds, follows on the heels of ignorance and carelessness. The necessary result of a wound, either from bullet or bayonet, is curiously slight, as a rule : its "inherited" as compared with its "acquired"

characteristics are seemingly innocuous. Here is the path of advance for the Reformer.

Can we dare to look forward to a Millennium, when the men themselves will be their own Sanitary Police ? When, instructed by lecture and demonstration in peace-time, disciplined and self-controlled, they will conserve for the fighting lines the whole force at the Commander's disposal. The enormous difference between its paper strength and its effective striking strength has hitherto been a disgrace and a menace. But the dawn of a better day even now brightens the sky.

After all, what do we want ? Cleanliness. That is all. Given absolute cleanliness of habits, of person, of food and of drink, and aseptic cleanliness in the treatment of wounds, then fair limits will be set to the wicked wastage of war.

For an honourable death on the battle-field the soldier's courage and patriotism will always be well prepared ; but to die miserably, poisoned by dirt, is more than we can dare to ask of him. We can no longer remain indifferent to the hideous ravages of Disease. War has revealed them to us, Science has given us weapons, Charity urges their use.

In Conclusion, I cannot claim that any original research has gone to the making of this book. I have merely linked together the stories that throw light upon the subject of Ambulance Work on the Battle-field, found in the writings of such authors as Withington, Dr. Sandwith, the Rev. Woodhouse,

M. Moynier, Sir Thomas Longmore, Sir John Furley, Colonel Macpherson, and very many other authorities, both military and civilian, too numerous to mention individually. And I hereby acknowledge my indebtedness to them.

APPENDIX I

GENEVA CONVENTION OF AUGUST 22ND,
1864.

(TRANSLATION.)

Article I.

Ambulances and military hospitals shall be acknowledged to be neutral, and, as such, shall be protected and respected by belligerents so long as any sick or wounded may be therein.

Such neutrality shall cease if the ambulances or hospitals should be held by a military force.

Article II.

Persons employed in hospitals and ambulances, comprising the staff for superintendence, medical service, administration, transport of wounded, as well as chaplains, shall participate in the benefit of neutrality whilst so employed, and so long as

there remain any wounded to bring in or to succour.

Article III.

The persons designated in the preceding Article may, even after occupation by the enemy, continue to fulfil their duties in the hospital or ambulance which they serve, or may withdraw in order to rejoin the corps to which they belong.

Under such circumstances, when those persons shall cease from their functions, they shall be delivered by the occupying army to the outposts of the enemy.

Article IV.

As the equipment of military hospitals remains subject to the laws of war, persons attached to such hospitals cannot, in withdrawing, carry away any articles but such as are their private property.

Under the same circumstances an ambulance shall, on the contrary, retain its equipment.

Article V.

Inhabitants of the country who may bring help to the wounded shall be respected, and shall remain free. The Generals of the belligerent Powers shall make it their care to inform the inhabitants of the appeal addressed to their humanity, and of the neutrality which will be the consequence of it.

Any wounded man entertained and taken care of in a house shall be considered as a protection thereto. Any inhabitant who shall have entertained wounded men in his house shall be exempted from the quartering of troops, as well as from a part of the contributions of war which may be imposed.

Article VI.

Wounded or sick soldiers shall be entertained and taken care of, to whatever nation they may belong.

Commanders-in-Chief shall have the power to deliver immediately to the outposts of the enemy soldiers who have been wounded in an engagement when circumstances permit this to be done, and with the consent of both parties.

Those who are recognized, after their wounds are healed, as incapable of serving, shall be sent back to their country.

The others may also be sent back, on condition of not again bearing arms during the continuance of the war.

Evacuations, together with the persons under whose directions they take place, shall be protected by an absolute neutrality.

Article VII.

A distinctive and uniform flag shall be adopted for hospitals, ambulances and evacuations. It must, on every occasion, be accompanied by the

national flag. An arm-badge (*brassard*) shall also be allowed for individuals neutralized, but the delivery thereof shall be left to military authority.

The flag and the arm-badge shall bear a red cross on a white ground.

Article VIII.

The details of execution of the present Convention shall be regulated by the Commanders-in-Chief of belligerent armies, according to the instructions of their respective Governments, and in conformity with the general principles laid down in this Convention.

Article IX.

The High Contracting Powers have agreed to communicate the present Convention to those Governments which have not found it convenient to send Plenipotentiaries to the International Conference at Geneva, with an invitation to accede thereto; the Protocol is for that purpose left open.

Article X.

The present Convention shall be ratified, and the ratifications shall be exchanged at Berne in four months, or sooner if possible.

APPENDIX II

GENEVA CONVENTION OF JULY 6TH, 1906.

(TRANSLATION.)

CHAPTER I.—THE WOUNDED AND SICK.

Article 1.

Officers and soldiers, and other persons officially attached to armies, shall be respected and taken care of when wounded or sick, by the belligerent in whose power they may be, without distinction of nationality.

Nevertheless, a belligerent who is compelled to abandon sick or wounded to the enemy shall, as far as military exigencies permit, leave with them a portion of his medical personnel and material to contribute to the care of them.

Article 2.

Except as regards the treatment to be provided for them in virtue of the preceding Article, the wounded and sick of an army who fall into the

hands of the enemy are prisoners of war, and the general provisions of international law concerning prisoners are applicable to them.

Belligerents are, however, free to arrange with one another such exceptions and mitigations with reference to sick and wounded prisoners as they may judge expedient; in particular they will be at liberty to agree—

To restore to one another the wounded left on the field after a battle;

To repatriate any wounded and sick whom they do not wish to retain as prisoners, after rendering them fit for removal or after recovery;

To hand over to a neutral State, with the latter's consent, the enemy's wounded and sick to be interned by the neutral State until the end of hostilities.

Article 3.

After each engagement the Commander in possession of the field shall take measures to search for the wounded, and to ensure protection against pillage and maltreatment both for the wounded and for the dead.

He shall arrange that a careful examination of the bodies is made before the dead are buried or cremated.

Article 4.

As early as possible each belligerent shall send to the authorities of the country or army to which

they belong the military identification marks or tokens found on the dead, and a nominal roll of the wounded or sick who have been collected by him.

The belligerents shall keep each other mutually informed of any internments and changes, as well as of admissions into hospital and deaths among the wounded and sick in their hands. They shall collect all the articles of personal use, valuables, letters, etc., which are found on the field of battle or left by the wounded or sick who have died in the medical establishments or units, in order that such objects may be transmitted to the persons interested by the authorities of their own country.

Article 5.

The competent military authority may appeal to the charitable zeal of the inhabitants to collect and take care of, under his direction, the wounded or sick of armies, granting to those who respond to the appeal special protection and certain immunities.

CHAPTER II.—MEDICAL UNITS AND ESTABLISHMENTS.

Article 6.

Mobile medical units (that is to say, those which are intended to accompany armies into the field),

and the fixed establishments of the medical service shall be respected and protected by the belligerents.

Article 7.

The protection to which medical units and establishments are entitled ceases if they are made use of to commit acts harmful to the enemy.

Article 8.

The following facts are not considered to be of a nature to deprive a medical unit or establishment of the protection guaranteed by Article 6 :—

1. That the personnel of the unit or of the establishment is armed, and that it uses its arms for its own defence or for that of the sick and wounded under its charge.

2. That in default of armed orderlies the unit or establishment is guarded by a piquet or by sentinels furnished with an authority in due form.

3. That weapons and cartridges taken from the wounded and not yet handed over to the proper department are found in the unit or establishment.

CHAPTER III.—PERSONNEL.

Article 9.

The personnel engaged exclusively in the collection, transport, and treatment of the wounded and the sick, as well as in the administration of

medical units and establishments, and the Chaplains attached to armies, shall be respected and protected under all circumstances. If they fall into the hands of the enemy they shall not be treated as prisoners of war.

These provisions apply to the guard of medical units and establishments under the circumstances indicated in Article 8 (2).

Article 10.

The personnel of Voluntary Aid Societies, duly recognized and authorized by their Government, who may be employed in the medical units and establishments of armies, is placed on the same footing as the personnel referred to in the preceding Article, provided always that the first-mentioned personnel shall be subject to military law and regulations.

Each state shall notify to the other, either in time of peace or at the commencement of or during the course of hostilities, but in every case before actually employing them, the names of the Societies which it has authorized, under its responsibility, to render assistance to the regular medical service of its armies.

Article 11.

A recognized Society of a neutral country can only afford the assistance of its medical personnel and units to a belligerent with the previous consent

of its own Government and the authorization of the belligerent concerned.

A belligerent who accepts such assistance is bound to notify the fact to his adversary before making any use of it.

Article 12.

The persons designated in Articles 9, 10 and 11, after they have fallen into the hands of the enemy, shall continue to carry on their duties under his direction.

When their assistance is no longer indispensable, they shall be sent back to their army or to their country at such time and by such route as may be compatible with military exigencies.

They shall then take with them such effects, instruments, arms, and horses as are their private property.

Article 13.

The enemy shall secure to the persons mentioned in Article 9, while in his hands, the same allowances and the same pay as are granted to the persons holding the same rank in his own army.

CHAPTER IV.—MATERIAL.

Article 14.

If mobile medical units fall into the hands of the enemy they shall retain their material,

including their teams, irrespectively of the means of transport and the drivers employed.

Nevertheless, the competent military authority shall be free to use the material for the treatment of the wounded and sick. It shall be restored under the conditions laid down for the medical personnel, and so far as possible at the same time.

Article 15.

The buildings and material of fixed establishments remain subject to the laws of war, but may not be diverted from their purpose so long as they are necessary for the wounded and the sick.

Nevertheless, the Commanders of troops in the field may dispose of them, in case of urgent military necessity, provided they make previous arrangements for the welfare of the wounded and sick who are found there.

Article 16.

The material of Voluntary Aid Societies which are admitted to the privileges of the Convention under the conditions laid down therein is considered private property, and as such to be respected under all circumstances, saving only the right of requisition recognized for belligerents in accordance with the laws and customs of war.

CHAPTER V.—CONVOYS OF EVACUATION.

Article 17.

Convoys of evacuation shall be treated like mobile medical units subject to the following special provisions :—

1. A belligerent intercepting a convoy may break it up if military exigencies demand, provided he takes charge of the sick and wounded who are in it.

2. In this case, the obligation to send back the medical personnel, provided for in Article 12, shall be extended to the whole of the military personnel detailed for the transport or the protection of the convoy and furnished with an authority in due form to that effect.

The obligation to restore the medical material, provided for in Article 14, shall apply to railway trains, and boats used in internal navigation, which are specially arranged for evacuations, as well as to the material belonging to the medical service for fitting up ordinary vehicles, trains, and boats.

Military vehicles other than those of the medical service may be captured with their teams.

The civilian personnel and the various means of transport obtained by requisition, including railway material and boats used for convoys, shall be subject to the general rules of international law.

CHAPTER VI.—THE DISTINCTIVE EMBLEM.

Article 18.

As a compliment to Switzerland, the heraldic emblem of the red cross on a white ground, formed by reversing the Federal colours, is retained as the emblem and distinctive sign of the medical service of armies.

Article 19.

With the permission of the competent military authority this emblem shall be shown on the flags and armlets (*brassards*) as well as on all the material belonging to the medical service.

Article 20.

The personnel protected in pursuance of Articles 9 (paragraph 1), 10, and 11 shall wear fixed to the left arm, an armlet (*brassard*) with a red cross on a white ground, delivered and stamped by the competent military authority, and accompanied by a certificate of identity in the case of persons who are attached to the medical service of armies, but who have not a military uniform.

Article 21.

The distinctive flag of the Convention shall only be hoisted over those medical units and establishments which are entitled to be respected under the Convention, and with the consent of the military authorities. It must be accompanied by

the national flag of the belligerent to whom the unit or establishment belongs.

Nevertheless, medical units which have fallen into the hands of the enemy, so long as they are in that situation, shall not fly any other flag than that of the Red Cross.

Article 22.

The medical units belonging to neutral countries which may be authorized to afford their services under the conditions laid down in Article 11 shall fly, along with the flag of the Convention, the national flag of the belligerent to whose army they are attached.

The provisions of the second paragraph of the preceding Article are applicable to them.

Article 23.

The emblem of the red cross on a white ground and the words "Red Cross" or "Geneva Cross" shall not be used either in time of peace or in time of war, except to protect or to indicate the medical units and establishments and the personnel and material protected by the Convention.

CHAPTER VII.—APPLICATION AND CARRYING OUT
OF THE CONVENTION.

Article 24.

The provisions of the present Convention are only binding upon the Contracting Powers in the

case of war between two or more of them. These provisions shall cease to be binding from the moment when one of the belligerent Powers is not a party to the Convention.

Article 25.

The Commanders-in-Chief of belligerent armies shall arrange the details for carrying out the preceding Articles, as well as for cases not provided for, in accordance with the instructions of their respective Governments and in conformity with the general principles of the present Convention.

Article 26.

The Signatory Governments will take the necessary measures to instruct their troops, especially the personnel protected, in the provisions of the present Convention, and to bring them to the notice of the civil population

CHAPTER VIII.—PREVENTION OF ABUSES AND INFRACTIONS.

Article 27.

The Signatory Governments, in countries the legislation of which is not at present adequate for the purpose, undertake to adopt or to propose to their legislative bodies such measures as may be necessary to prevent at all times the employment of the emblem or the name of Red Cross or Geneva

Cross by private individuals or by Societies other than those which are entitled to do so under the present Convention and in particular for commercial purposes as a trade mark or trading mark.

The prohibition of the employment of the emblem or the names in question shall come into operation from the date fixed by each legislature, and at the latest five years after the present Convention comes into force. From that date it shall no longer be lawful to adopt a trade mark or trading mark contrary to this prohibition.

Article 28.

The Signatory Governments also undertake to adopt, or to propose to their legislative bodies, should their military law be insufficient for the purpose, the measures necessary for the repression in time of war of individual acts of pillage and maltreatment of the wounded and sick of armies, as well as for the punishment, as an unlawful employment of military insignia, of the improper use of the Red Cross flag and armlet (*brassard*) by officers and soldiers or private individuals not protected by the present Convention.

They shall communicate to one another, through the Swiss Federal Council, the provisions relative to these measures of repression at the latest within five years from the ratification of the present Convention.

GENERAL PROVISIONS.

Article 29.

The present Convention shall be ratified as soon as possible. The ratification shall be deposited at Berne.

When each ratification is deposited a *procès verbal* shall be drawn up, and a copy thereof certified as correct shall be forwarded through the diplomatic channel to all the Contracting Powers.

Article 30.

The present Convention shall come into force for each Power six months after the date of the deposit of its ratification.

Article 31.

The present Convention, duly ratified, shall replace the Convention of the 22nd August, 1864, in relations between the Contracting States. The Convention of 1864 remains in force between such of the parties who signed it who may not likewise ratify the present Convention.

Article 32.

The present Convention may be signed until the 31st December next by the Powers represented at the Conference which was opened at Geneva on the 11th June, 1906, as also by the Powers, not

represented at that Conference, which signed the Convention of 1864.

Such of the aforesaid Powers as shall have not signed the present Convention by the 31st December, 1906, shall remain free to accede to it subsequently. They shall notify their accession by means of a written communication addressed to the Swiss Federal Council, and communicated by the latter to all the Contracting Powers.

Other Powers may apply to accede in the same manner, but their request shall only take effect if within a period of one year from the notification of it to the Federal Council no objection to it reaches the Council from any of the Contracting Powers.

Article 33.

Each of the Contracting Powers shall be at liberty to denounce the present Convention. The denunciation shall not take effect until one year after the written notification of it has reached the Swiss Federal Council. The Council shall immediately communicate the notification to all the other Contracting Powers.

The denunciation shall only affect the Power which has notified it.



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